

GENERAL SCIENCE

THE

Country GUIDE

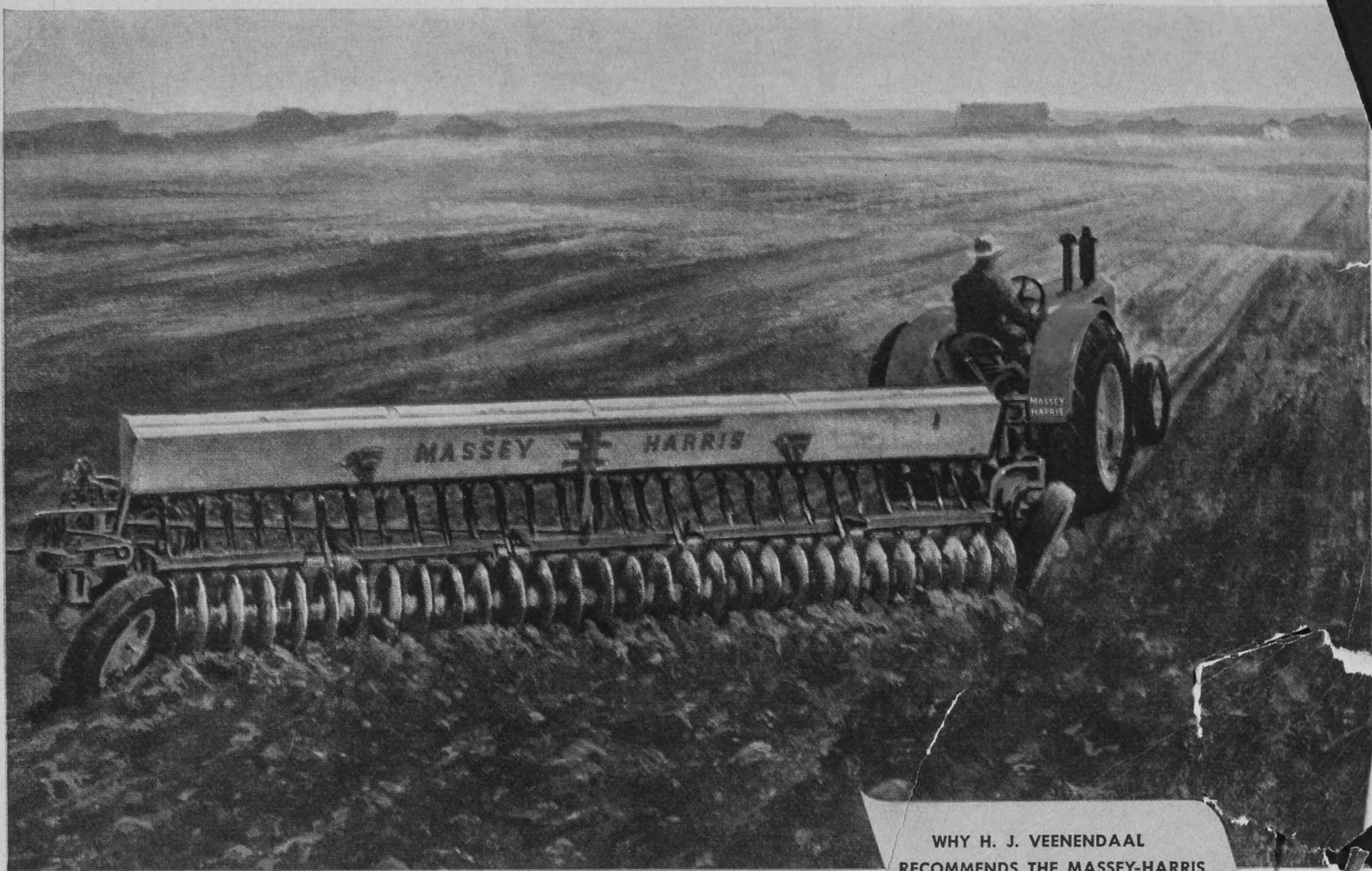
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FEBRUARY, 1951



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[Photo by D. Clemson]

THE *Country* GUIDE

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3. Security of a Job. To earn the money which provides all other kinds of security, a man must have a job. Life insurance helps create jobs — by investing policyholders' money in securities which finance the building of new schools, highways, power plants and other public works and vital industries.



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4. Security of a Home. Most Canadians own their own homes. In this way they enjoy the double security of an investment and freedom from house-hunting problems. Many of these homes have been built with money invested on behalf of policyholders by life insurance companies.

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A report from
The LIFE INSURANCE COMPANIES in Canada
and their Representatives

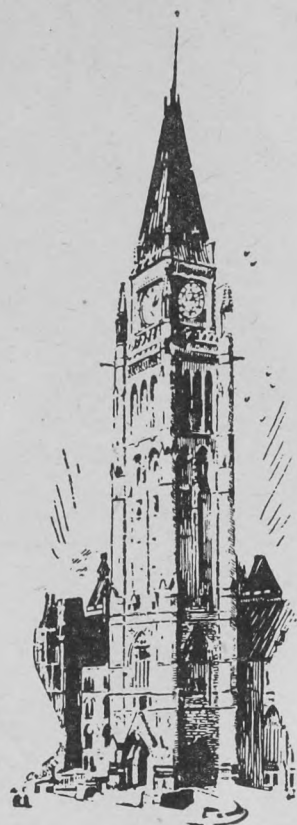
WORKING FOR NATIONAL PROGRESS . . . BUILDING PERSONAL SECURITY

L-950C

Under the Peace Tower

WHEN General Eisenhower came to Ottawa and felt our military muscles, he was not impressed. When General Mark Clark, four-star general of the U.S. forces, arrived here earlier, and also felt our muscles, he was not impressed. This, according to United States writers here, is the inside information. Of course, the visits went off in a round of state dinners, formal calls, plenty of striped pants, and tons of high brass. But the lowdown on the higher-ups is this: the Yanks are not impressed with our military effort.

Not so long ago, Canada was the pin-up boy of United States. We could do nothing wrong. From that exalted position we have fallen till today we are, by comparison, scraping bottom. It is apparent in diplomatic circles, it is evident in the tactics of U.S. officials here, it is manifest in the press.



THE Augustan Age began to fade with the death of Hon. Laurence Steinhardt, United States Ambassador, killed in a plane accident near Ottawa almost a year ago. The filling of his job with a routine appointee from the State Department was the sure tipoff that we were slipping. But since Korea, we have not merely been slipping, we are skidding.

Here are some criticisms of Americans in Canada, as reflected by what their people in Ottawa and their papers are saying back home:

1. Canada should have the draft—conscription!
2. The Yanks don't want to carry all the load in Korea and elsewhere.
3. Canada is the "most promising country" in the world, always promising, never doing.
4. Canada compares herself with United States on equal terms except when asked to deliver the goods; then we deliver only "promissory notes."
5. We are tending to put on a sour mouth and say we are "small," yet we are the fifth nation in population in the Atlantic Pact. We could compare our effort with New York State, at least.
6. Our sinking position is reflected in the changes at the U.S. Embassy, where "soft" types are replaced with "tough" types.

I want it understood that what I say does not necessarily reflect my own thinking. But it is impossible to be around Ottawa and not feel the temperature going down among the Americans.

Canadians generally have argued that we are a small country, that it could not conscript an army of any size, and that it can best serve its Allies by working in the mines, forests and mills, producing the weapons of war. Or so the Americans say we say.

We are also eager to remind the Yanks that we entered the last two wars far ahead of the United States.

"Americans are not impressed," said one big shot U.S. correspondent to this writer. "That's past."

"Should the folks back in Possum County, Tennessee, dodge the draft because Possum County has only a small population," he barked. "It has also got a big coal mine and can grow right good cotton which can be used

by our Allies. Maybe Possum County folks should stay home and produce things for its Allies."

The Americans are becoming sharper with their tongues, their answers.

Canada, they point out, is not so small as some of its politicians would like to make out. It is bigger in area than any state. It is bigger than most in population. Should the people of Pennsylvania, or Missouri, or Rhode Island, beg off the draft because their state populations are less than Canada!

Or should Belgium, Holland or six other countries in the Atlantic Pact, which have smaller populations than Canada, decide they are too small to raise armies?

Americans here charge that Canada makes loud talk at Lake Success, but does nothing at home.

"Americans, with 50,000 army and marine casualties already in Korea, want to know why Canada cannot show some kind of comparable activity," said this man.

Then he said that Canada had called itself a Middle Power.

"Middle power?" he asked cynically. "Are you sure you do not mean piddle power?"

His Parthian shot was: "You Canadians have done less than any other country in the Atlantic Pact except Iceland."

This of course is extremely put, and admittedly it is from a man who looks at the Canadian scene somewhat bitterly. On the other hand, in his insistence that Canada should have the draft, he is right in step with the Canadian Legion, which has been urging conscription or its equivalent.

THIS loss of face with United States is reflected in no place more than at 100 Wellington Street, where the U.S. Embassy is. The late Larry Steinhardt, an ambassador among ambassadors, was Truman's ace diplomat. After he died, they sent Hon. Stanley Woodward, a State Department authority on protocol, but with no

(Please turn to page 79)

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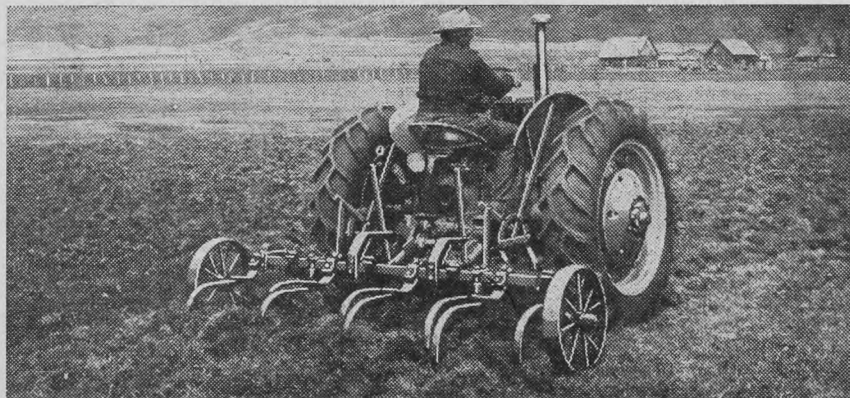
R. C. Cunningham

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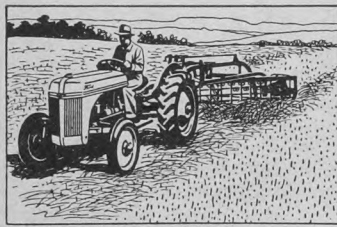
The Ford Tractor's engine has an ample reserve of power and excellent "lugging" ability. But to get greatest possible performance and economy, you should run the engine at about 1750 r.p.m. Now with the Proof-Meter you can hit and hold this speed all day!

Year by year, the Ford Tractor has been made better and better. And now a daring new advancement has been added . . . a way for the Ford Tractor owner to be sure he is getting the fine performance, outstanding economy and long life which Ford builds into this great tractor.

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Proves tractor speed is right for work being done



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very close limits. With the Proof-Meter you at last know the travel speed in any gear, on any job.

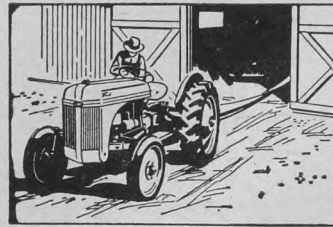
Proves right speed for best work with P.T.O.-operated machines



right combination of gears for correct travel speed, and throttle setting for P.T.O. shaft speed—for best results.

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Proves belt speed right for most efficient operation



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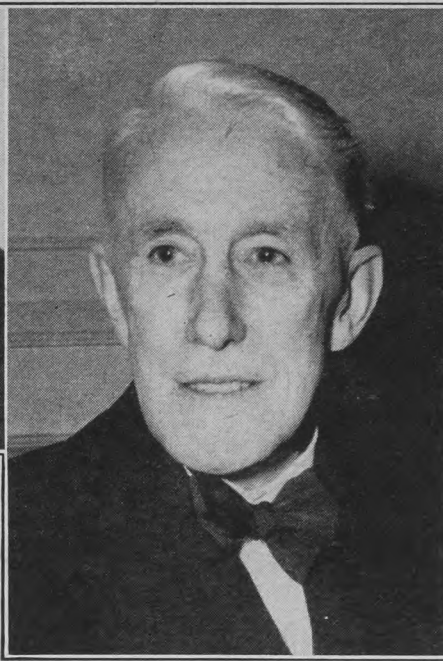
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Get in touch with your nearby Ford Tractor dealer—he's a good man to know! He'll gladly show you how the Ford Tractor can reduce work and increase profits.



C.F.A. Highlights

The Canadian Federation of Agriculture holds its fifteenth and most successful annual meeting

by W. D. NASH

A POLITICIAN has been described as a man who studies which way the wind is blowing. At any rate, it was a shrewd, well-timed, and not unfriendly gesture made by the Federal government, when during the annual convention of the Canadian Federation of Agriculture at Calgary last month, the Minister of Trade and Commerce, the Rt. Hon. C. D. Howe, announced an increase of 20 cents per bushel in the initial payment on wheat and barley, and 10 cents on oats.

This was the 15th annual meeting of the Federation and for 11 of the 15 years, its president has been H. H. Hannam, who, incidentally, is also the president of the International Federation of Agricultural Producers. At one time last fall, it almost looked as though he might leave the C.F.A., because F.A.O., the Food and Agricultural Organization of the United Nations, made him a handsome offer to come over into the wider sphere, but for reasons best known to himself, he decided not to go.

In his presidential address Mr. Hannam thought that the outlook for Canadian agriculture is much brighter than it was a year ago. It was then that the British food contracts seemed to be petering out, and the Canadian government even had to coax Britain with some deferred wheat deliveries, to secure a bacon contract at all.

"But," said Mr. Hannam, "with expanding industry, record employment and high purchasing power, domestic demand for farm products is strong and likely to continue so. With the currency problem substantially improved, the United Kingdom is in a more favorable position to purchase substantial quantities of our farm products. Generally speaking, inter-

national trade is better, and surpluses are not likely to be a serious problem in the near future."

MR. HANNAM called attention to some tender spots in the Canadian agricultural economy, chief among which were frost and late harvesting of grain crops in western Canada, discouraging prices and market prospects for potatoes in the Maritime provinces, the unsatisfactory returns for milk, and the uncertain outlook for butter. He found that since the peak of farm purchasing power was reached in June, 1948, farmers had experienced a decline in purchasing power amounting to 12 per cent between October, 1948, and October, 1950. This decline would probably continue during 1951 unless the steady rise in farm costs can be slowed down.

Turning to the field of farm organization, Mr. Hannam said: "... in respect to the position of agriculture, we are in a new era today. It is a new, and greatly improved era ... The farmer's participation in shaping policies that control his destiny has grown steadily with the rise and consolidation of an effective national organization. By co-ordinating ... farm organization into one national body, Canadian farmers have done much to raise the status of agriculture, to put order and stability into the economic aspect of that industry ... (and) ... they have taken their place, and found

they can do so along side the large and powerful, and in most cases, older, farm organizations of other lands."

In the field of orderly marketing, time alone will tell whether the president was speaking prophetically when he said: "I should not be surprised if the next major development along this line will be for organized producers in Canada to negotiate their own export sales and sales agreements. This is in line with the basic philosophy of the farm movement ... and is likely to be more permanently successful than depending wholly on government assistance programs, although the latter ... are absolutely essential under certain conditions."

INFLATION stalked the C.F.A. meeting at all sessions. It was brought out into the open by Dr. E. C. Hope, economist for the Federation, who discussed the course of economic events as they have affected the farmer during the eight-year period from 1942 to 1949 inclusive. He showed that if net farm income in 1942 was taken as 100, this index figure had risen to 137 by 1949. While this was going on, farm living costs had increased from 100 to 146, with the result that real net income, instead of increasing during the eight-year period by 37 per cent, had actually dropped by six per cent to an index figure of 94.

"A dollar spent by the farmer for farm materials ... in August of 1950, would only buy about 60 per cent as much as it would in 1942. Judging by the decline in the industrial materials' dollar since June, the farmer's dollar will be down to 50 cents by the sum-

Left to right: Gilbert McMillan, Huntington, Que., president, Dairy Farmers of Canada; C. A. Milligan, Napanee, Ontario Federation of Agriculture; J. E. Brownlee, Calgary, president, United Grain Growers Ltd.; Roy Marler, Bremner, Alta., president, Alberta Federation of Agriculture.

E. J. Garland, Canadian Minister to Norway, former Alberta farmer and Member of Parliament: C.F.A. Banquet guest speaker.

W. J. Parker, Winnipeg, president, Manitoba Pool Elevators and vice-president, Canadian Federation of Agriculture; H. H. Hannam, Ottawa, president, Canadian Federation of Agriculture and president, International Federation of Agricultural Producers.

mer of 1951, compared with its value in 1942.

"The man who retired on a fixed income in 1942 now has a standard of living approximately one-third lower than the year he retired. A person who bought a victory loan bond of \$1,000 in 1942 and still holds it, or sells it now, had suffered a loss in value of \$330 in terms of what the bond will buy today compared with eight years ago."

Though the price level in the United States and Canada is now at the highest level in history (meaning that money now has less value than at any time in history), and inflation is already very serious, the western world is beginning to re-arm on an extensive scale at the very time when employment and wages are high and industrial activity very great. "This means," said Dr. Hope, "that unless we pay for these defence measures as we go, the sharp fall in the value of money which began a year ago, will continue."

What then of the position of agriculture? Dr. Hope presented figures to show that whereas the farmer's real income had decreased by six per cent, the average annual wages and salaries in manufacturing, mining, construction, railways and the Dominion Civil Service, had increased by 57 per cent, and real wages had increased by 11 per cent, despite the increase in the cost of living. If however, the changing value of the dollar is not considered, and the number of dollars received by the average wage and salary earner is compared with (Please turn to page 76)

Left to right: Floyd Griesbach, Toronto, Farm Radio Forum; L. Currie, Vancouver, B.C. Federation of Agriculture; K. Kapler, Strome, Alberta Federation of Agriculture; Gerald Habing, Hazelridge, president, Manitoba Federation of Agriculture.

J. H. Wesson, Regina, president, Saskatchewan Co-operative Producers Limited; A. H. Mercer, Vancouver, Fraser Valley Milk Producers Association; George Coote, Nanton, Alberta.

A. P. Gleave, Biggar, Saskatchewan Farmers Union; C. E. Wall, Vancouver, secretary, B.C. Federation of Agriculture; Hector Hill, Truro, Nova Scotia Farmers' Association; J. B. Lemoine, vice-president, L'Union Catholique des Cultivateurs.





Jerry Potts
Copyright: Ernest Brown

Jerry Potts' remarkable gifts as a guide and interpreter made him an invaluable asset to the North-west Mounted Police and won him recognition as

THE GREAT SCOUT

by W. EVERARD EDMONDS

Illustrated by Clarence Tillenius



A SWIFT crime of vengeance and an even swifter retribution first drew the attention of the rough men of the frontier to the qualities of Jerry Potts, then a lad of 15 or 16. Before his untimely death he was already acclaimed by his own hard riding comrades, red men and white, as the peerless plainsman.

In Civil War days the boy Jerry Potts lived with his Piegan mother and Scottish father at Fort Benton, Montana, where John Potts was factor in charge of the American Fur Company's trading post. The elder Potts came of good family, a number of whom were members of the learned professions in Edinburgh, to which city the father once thought of sending Jerry to complete his education.

Among John Potts' employees was a man who had one day quarrelled violently with an Indian. One of this man's duties was to close the shutters of the store at night. The Indian, still angry and determined on revenge, went out and lay in the bush outside the fort, from where he could see the upper windows of the store and shoot his enemy when he came to close the shutters.

On this occasion, however, the factor had something else for the man to do, and he himself went to the window. As he stretched out his arm to unhook the shutter, the Indian, taking him for his foe, fired with fatal effect, then set out for his camp several hundreds of miles away.

Young Jerry was soon in hot pursuit of the murderer whom he followed far to the north in British territory. There in the Blackfoot realm, in the midst of his own people, the murderer received his just reward at the hands of his youthful avenger. In admiration of the lad's pluck and cold, stark courage, the Blackfoot tribe spared his life and, from that day forward, gave him the freedom of their camps.

It was not long before Jerry had another opportunity to show the stern stuff of which he was made. Buffalo were unusually plentiful in the autumn of 1870 and young Potts threw in his lot with a large hunting party of Bloods and Piegans. But just at this time the Cree chief, Piapot, ventured into the Blackfoot country with a large war party of Crees and Assiniboines. The invaders camped on the left bank of the Belly River, opposite the site of the present city of Lethbridge. Piapot sent his scouts up the Belly to where a small party of old Piegan men, women and children were encamped,

and these unfortunates were all put to death, except one boy of 13 who took to the bush, and eventually found his way to Kipp where he warned the white trader and the Piegan Indians.

THE Piegans, who had come to look upon Jerry Potts as "big medicine" sought him out and persuaded him to take command of them as war chief. Next morning at dawn, Potts took Piapot's camp by surprise, and after a desperate battle drove the Assiniboines and Crees out of the country.

Howell Harris, the white trader at Fort Kipp who, with another man, had followed Potts out of curiosity had a full view of the encounter. The Crees and Assiniboines, driven out of their camping ground, took to the ford near the coal banks and, being crowded together, suffered heavily from the fire of Potts' warriors who followed them across the Belly, keeping up the fight as long as the enemy was in sight. Four hundred dead were counted on the field, apart from those who were killed at the ford and on the other side of the river.

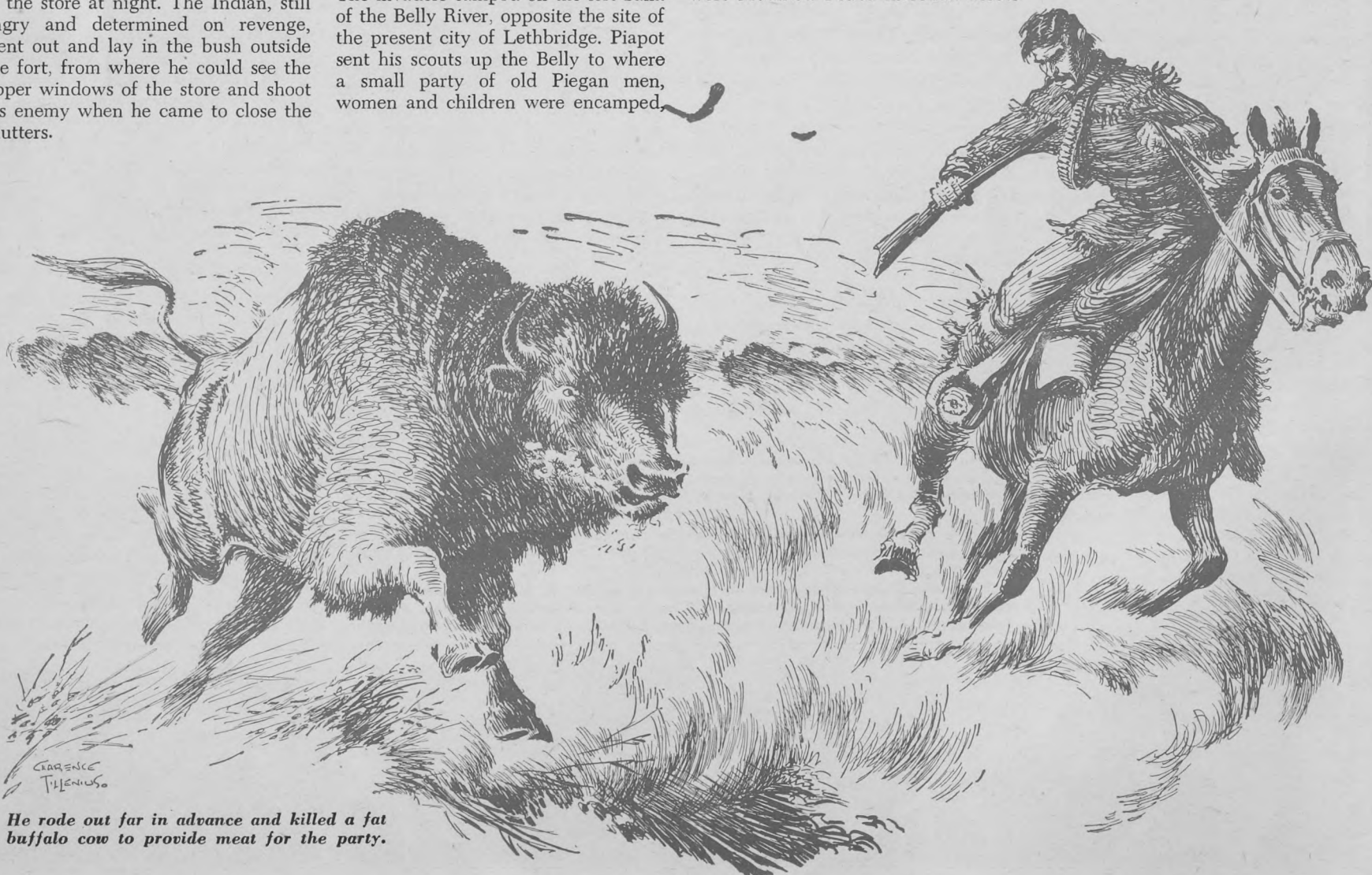
In 1874 the newly formed North-west Mounted Police marched across

the plains from Winnipeg to the foothills of the Rockies to establish the rule of law and order on that new frontier. Col. French, the Commissioner, knew the importance of enlisting the services of the best guide and interpreter who could be found. His choice of Potts was a natural, both because of his prowess, and his good relations with the Indians and the law-abiding elements of the white population.

Her Majesty's new auxiliary journeyed with Colonel French from Fort Benton to the Boundary trail on British territory. At this point French found it necessary to return east to Swan River, the new headquarters of the Mounties, and the work of establishing the first post in the foothills fell on his assistant commissioner, Lieut.-Col. J. F. Macleod, who proceeded north with his little party.

Potts won the confidence of all ranks the first day out. He rode out boldly at break of day far in advance of the

(Please turn to page 39)



He rode out far in advance and killed a fat buffalo cow to provide meat for the party.



Reverend Tanner was already licking at the egg-beater oblivious of his son's dirty looks.

REVEREND PRENTICE G. TANNER'S popularity in Willowdale started in his wife's kitchen, shortly after he first came to our town. On that occasion his wife was making Seven-Minute Icing for a chocolate cake, her contribution to the Ladies' Aid Tea.

"Cheer up," smiled Mrs. Tanner, a pleasant lady who always tried to be optimistic. "We've only been here two months, remember."

"You'd think that would be long enough to make some difference," mourned Reverend Tanner.

Morton, their ten-year-old son, became mournful too: "Gee! D'you think we'll have to move, Pop? I sure like this Willowdale place—there's good fishin' in the river."

"Well, son, we can only hope for the best," the minister answered in a dispirited way, taking over the egg-beater from his wife and whirling the handle. A Seven-Minute Icing took a lot of beating.

"If only you could just get a chance to meet the people," Mrs. Tanner said. "That would make all the difference in the world."

THEIR problem was the church's very small congregation, which Reverend Tanner had not been able to enlarge. He had accepted the "call" after the old minister died: the old minister had been a very fine old gentleman, but for the last few years of his service his sermons hadn't been audible beyond the first row of pews. Therefore the good old man had been unable to hold his congregation. So the Reverend Tanner had come at an all-time low in the church's affairs, and he hadn't been able to pull the church out of that declining slump. Willowdale was a stand-offish little town so far as newcomers were concerned; Reverend Tanner, a fine but somewhat shy man, hadn't been accepted yet. And the board of managers were already mumbling among themselves, hinting that perhaps Tanner wasn't the minister the church needed.

"I'll take another turn," Mrs. Tanner relieved her husband at the egg-beating. "How's the sermon coming?"

This was Saturday morning, the time when the Reverend Tanner always finished composing his Sunday sermon. As she asked the question, Mrs. Tanner glanced at her husband's hair, which was wildly rumpled. That indicated he had run into difficulties.

"I've only reached Thirdly," answered Prentice G. "It's disheartening, preparing a sermon for a handful of listeners."

THE PARSON'S TONGUE

by KERRY WOOD

"Perhaps you should come to this Tea," his wife suggested. "You might meet some new people that way."

"Come down to the river with me, Pop," broke in Morton. "There's all kinds o' people go fishin' at the back-water, Saturday afternoons. You'd like 'em, too: they're swell guys."

"It's a good idea, son," smiled the minister. "Personally, I'd greatly prefer it to—"

Mrs. Tanner silenced him with a warning glance, then concentrated on her Ladies' Aid cake icing. It had thickened sufficiently, but she gave it a few extra whips before rapping the egg-beater lightly against the edge of the bowl to shake off some of the gooey icing.

"I'll take that!" Reverend Tanner reached for the beater.

"Aw, Gee, Pop!" protested Morton. "Shush," laughed Mrs. Tanner. "Here, you can have this spoon."

Reverend Tanner was already licking at the egg-beater, oblivious to Morton's dirty looks. Morton had been waiting the full time required to make Seven-Minute Icing, just to clean up the egg-beater. The boy gulped down his spoonful in two swallows, scowling reproachfully at his father all the while. The Reverend Tanner extended his pink

tongue to its utmost stretch, trying to get all the sweet goodness from the flanges and wires of the double-bladed beater.

"Awwwwwwgggghhhh!" he said.

"What's that, dear?" murmured his wife.

"Aaawwwwgggghhhh!"

"Y' might gimme another helpin', at least," Morton hinted. "Pop's got more'n two spoonfuls on that ole beater."

"Aaaaawwwwgggghhhh!" repeated Reverend Tanner.

"Shhhh, now, Morton," said Mrs. Tanner, turning from the cake. "What did you say, Prentice?"

"Awwwwwwgggghhhh! Aawwwwgggghhhh! Aaaaawwwwgggghhhh!" spluttered Reverend Tanner.

"His tongue's stuck," Morton announced, not without some satisfaction. "Serves you right, Pop—that egg-beater was mine, by rights."

"Hush, Morton," said his mother. She stopped spreading the icing to look inquiringly across at her husband. The Reverend Tanner gesticulated wildly with his left hand, indicating the egg-beater which he was holding in his other hand. The minister looked slightly cross-eyed, trying to peer down at the egg-beater just under his nose.

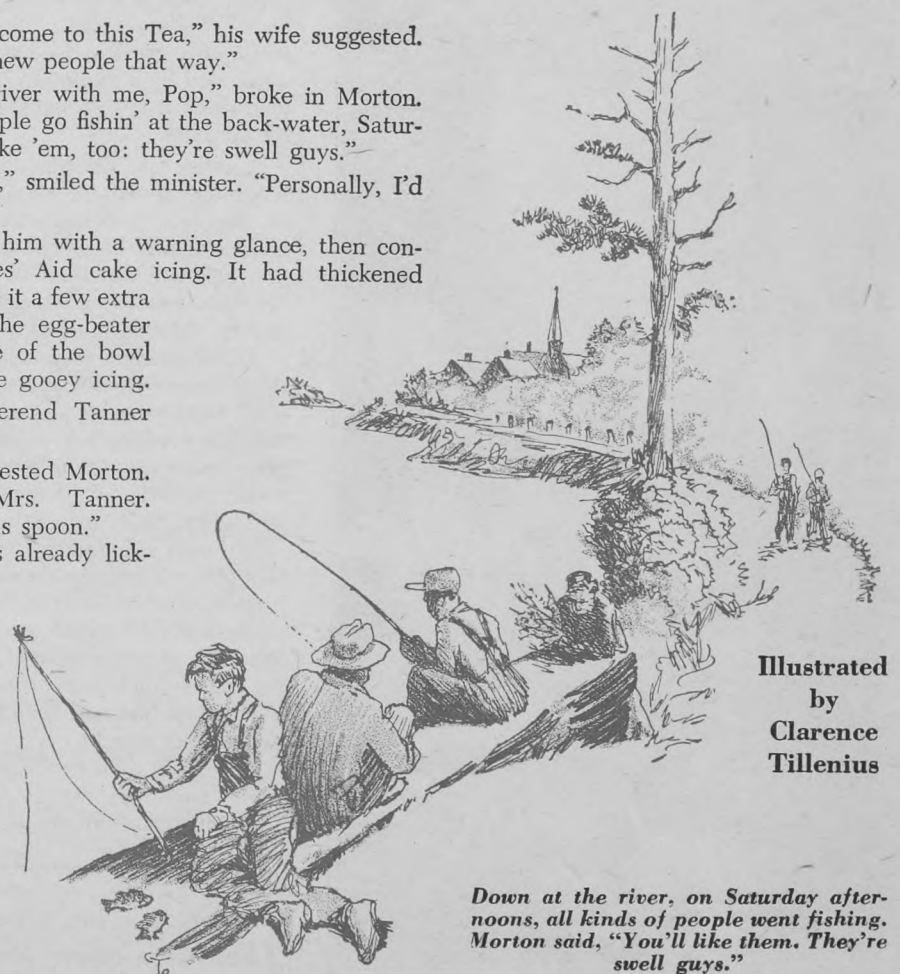
"Oh, dear!" sighed Mrs. Tanner, putting down her icing knife. "Here, let me give it a pull."

She seized the egg-beater and jerked on it slightly, which made Reverend Tanner's whole body jerk violently as he uttered a screech.

"He's stuck good," declared Morton. "If you'd given me that beater, Pop, this wouldn't have happened."

(Please turn to page 46)

How it came about that Reverend Prentice G. Tanner, shortly after his arrival, became a popular figure in Willowdale



Illustrated
by
Clarence
Tillenius

Down at the river, on Saturday afternoons, all kinds of people went fishing. Morton said, "You'll like them. They're swell guys."



This big cat has one fear—a dog. Even the racket raised by a small pooch can make it take to the trees.

Below: The end of a cougar hunt. The hounds have driven it to a spot where the riflemen can move in.



WHAT is the most destructive predatory animal in the Western Hemisphere? The most rarely seen by man in its wild state? The most widely distributed of any American animal? The answers to these questions are all rolled up in one powerful and highly intelligent package, and it is a cat.

You may hear a number of names for it, depending upon the section of the country. Puma, cougar, panther, mountain lion, are some. But from Patagonia in South America, to Central Canada, it is still the same big cat. Three hundred pounds in weight is not uncommon, with a length from nose tip to tail tip of nine feet.

Truth alone about the animal is enough. Yet many stories have grown up around it, most of them wrong. Then what has given this oversized puss such a reputation, even within established facts? For one thing, he is a wanton killer of both

watching both sides of a game, without being able to call any helpful signals.

Early that spring there were signs of a marauder in the district. The first surprise was that the lion worked so close to my log cabin station. Usually the big cat will establish a hunting route up to 25 miles in length, and travel it at quite regular intervals. But this one made its frequent kills among deer that grazed on the park-like meadow in front of my cabin. Then in June, cattlemen brought their herds up into the high country. They, too, grazed on my meadow, and the mountain lion switched from deer to nightly attacks upon calves. That was a mistake. I sent out for a government hunter.

The man who arrived, afoot, in a couple of days was small, old and gentle-looking. With him came only two medium-sized hounds, instead of a pack. He carried only a short-barrelled rifle; no other equipment. Surely this couldn't be one of the best

Phantom of the Wild

by
HAROLD CHANNING WIRE

deer and domestic ranch stock, and not only for food. It seems to be done in some warped idea of sport—particularly outwitting man.

In parts of the Rocky Mountain states and westward, where the animal is usually called a mountain lion, it has become a grave menace to horses, cattle and sheep. The U.S. Fish and Wildlife Service now has a number of experienced hunters out on the big cat's trail, and if you ever come upon one of these old-timers with his pack of dogs, stop and talk to him. He will have a vast knowledge of the country you are travelling. Also, he may straighten out some of those frightening, and untrue stories.

The voice "like a woman screaming" is one. That's mostly imagination, these professional hunters say. The mountain lion makes the same sounds as the common house cat. It purrs, mews, hisses, and at times caterwauls like any cat at night. There is one difference. Its voice is tremendously louder. So a tenderfoot camper, wildly awakened by a mountain lion's love-song, may very well think it is a woman screaming. Or 10 women, for all that!

Another tale, often heard, is that a mountain lion will follow a man closely and attack him. The tellers of this tale sometimes claim they even saw the beast stalking them. The truth is, no healthy mountain lion will do either of those things. In the few verified cases of attack upon human beings, it was proved that the animal was suffering from rabies.

As for seeing a mountain lion in any normal way, the chances are almost zero. One of the top government hunters, who has made 400 successful hunts, told me not long ago in Arizona that he had never once seen a mountain lion until his dogs ran it from cover. No other wild creature is so wary, so quick and silent, these men say.

My own experience, when I was a U.S. Forest Ranger in a remote district of the Sierra Nevada, proved this to be true. Often in riding patrol I came upon the carcass of a freshly killed deer. Warmth of the carcass and sign of the big cat tracks, as much as five inches across, showed that a mountain lion had been there only seconds before. Yet I never caught even a shadowy glimpse of one at times like that.

But once I did have a grandstand seat at a long and surprising mountain lion hunt. It was like

hunters in the Sierra Nevada, with 290 stock-killing mountain lions to his credit! I met him outside the station.

"I'm Lee Burke," he said. "You've got some cat trouble up here?"

He didn't start hunting at once. Instead, after I had explained the trouble, he ambled off across the meadow with his two hounds. An experienced hunter wants to look at the country before he starts tracking. In that way he can tell what routes the mountain lion may take when the dogs get it on the run. It was evening when Lee Burke came back to say that he had things pretty well worked out.

"This one's going to be easy," he promised. "There's plenty of sign around."

WE left early the next morning while dew was still on the grass and underbrush. Any dampness makes trailing easier for the dogs. Hot sun can destroy a mountain lion's scent.

Lee Burke walked ahead in his short-legged, unhurried gait, like a man going out on any routine job. But the dogs were eager and excited, tugging in front of him on rope leashes. I followed, riding a horse.

He led up a narrow stringer of my station meadow and into a stand of aspen and pines. There he stopped and pointed at a large, scratched-up pile of sticks and leaves: "I found that yesterday. It ought to be a good place to start."

The scratch-pile was where the mountain lion had covered the carcass of a calf. Quite often this means that the big cat expects to return for another meal, or at least will come back near the spot where hunting was good. Lee Burke freed his two mottled grey-and-brown hounds.

They went to work silently at first, running in what seemed to be aimless circles, their noses held close to the earth, stopping, changing direction, and at times lifting their heads to test tree trunks and underbrush which the mountain lion's fur had touched.

In their silence they were working along scent that was old. There was nothing to bring up a burst of excitement. Then both dogs vanished through the aspen thicket. A moment later we heard them break into quick, sharp yelps. That wasn't the baying they would give forth when they actually sighted the cat. (Please turn to page 80)

The cougar has all the tricks of the fox plus a few of his own. In proof whereof The Guide offers this true story from the recollections of a former forest ranger

RESEARCH

AWAY back in the early days of grain grading, inspectors found it necessary to classify grain according to its moisture content. The only way they knew of doing this was to feel it and chew it. Then, if they believed it to contain too much moisture, they classified it as tough, or damp. This was not very satisfactory, and it was not long before the scientists produced a better method.

For 25 years the official way of testing for moisture has been the Brown-Duvel method, which takes about 45 minutes. For many years scientists and manufacturers have been seeking a much quicker and equally reliable method. Today, there are several types of equipment which, when installed in the country elevator, make it possible to secure a reasonably accurate moisture test in two or three minutes. As yet, however, none of these shorter methods is acceptable for official tests.

Moisture testing is important as a means of preventing stored grain from heating, or spoiling. Cereal chemists have conducted very elaborate and very long investigations into the problem created by excess moisture. They eventually found the maximum moisture content for safe storage; and later discovered that the heating and spoiling, which followed the storage of moist grain, was caused by molds. These molds are the same type of minute plant life which produce mold on bread or cheese; and they begin to grow when the relative humidity of the air between the kernels of stored grain reaches 75 per cent. Today, scientists know a great deal about moist grain; and what they have learned is naturally important to the farmers of western Canada, who produce hundreds of millions of bushels of grain much of which is exported to many different parts of the world.

THE principal agency for research into grain problems of all kinds in Canada is the Grain Research Laboratory of the Board of Grain Commissioners. This laboratory is not only the largest of its kind in Canada, but one of the largest in the world, and is operated under the authority of the Canada Grain Act. This Act, in one brief sentence, provides that "The Board shall maintain an efficient and adequately equipped laboratory for research work in relation to grain."

Now, it will be perfectly clear to anyone, of course, that merely doing this kind of research is not enough. The results must be sufficiently useful to warrant the cost, and they must be applied. For the Grain Research Laboratory this means that its results must be beneficial to the Canadian grain



A discussion of bread quality. Left to right: Dr. I. Hlynka, Dr. J. A. Anderson, Dr. G. N. Irvine.

producer, because it is almost entirely concerned with his problems, or those which affect his income.

The cost of operating the Laboratory is currently about \$150,000 yearly. This cost is met from the Federal treasury and amounts to slightly over one cent for each Canadian. If it was entirely met by those producers who market wheat through the Canadian Wheat Board, it would cost each one about \$1.53 per year. This pays for the work of a staff of 36 persons.

It is clear that the Laboratory is no small affair. It occupies approximately 6,300 square feet of floor space, divided into 17 rooms for efficiency's sake. The staff and equipment of each performs some special function. In addition to four small rooms used for offices, the other rooms are mainly small, separate laboratories devoted to general barley research, malting barley, durum research, baking and dough testing, general wheat research, protein laboratory, analytical laboratory and milling. In addition there is a constant-temperature room, a statistics office, a sample room, a workshop for the servicing of equipment, and a dark room for photography. Replacement of the equipment in use would cost, perhaps, a quarter of a million dollars. Some of it could not be replaced, because it has been devised in the Laboratory to meet special research needs, and has been built in the Laboratory workshop.

AT the head of this rather impressive institution is the Chief Chemist of the Board of Grain Commissioners, Dr. J. A. Anderson. He is the third to hold this position since the Laboratory was established in 1912. The first was Dr. F. J. Birchard who began with a staff of three or four chemists and technicians, and retired in 1933, by which time the Laboratory was well-equipped, well-known, and operating with a staff of about 15. Next came Dr. W. F. Geddes, during whose five-year reign the

Why the Board of Grain Commissioners maintains one of the largest grain research laboratories in the world

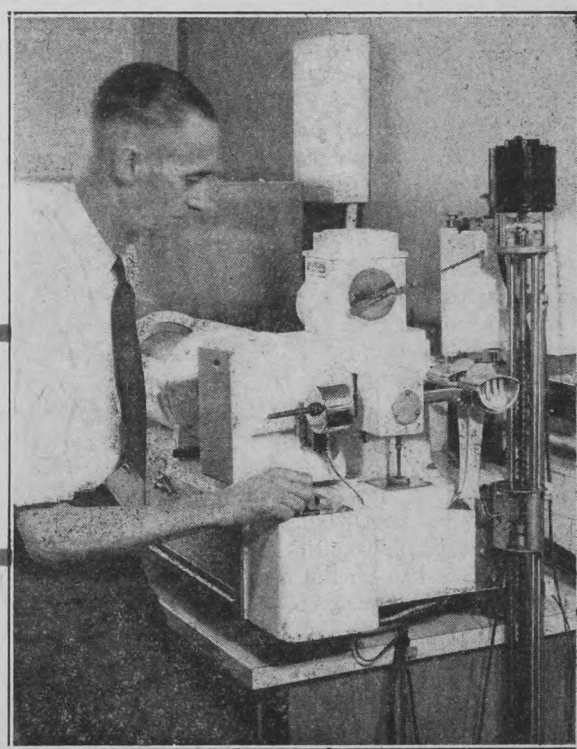
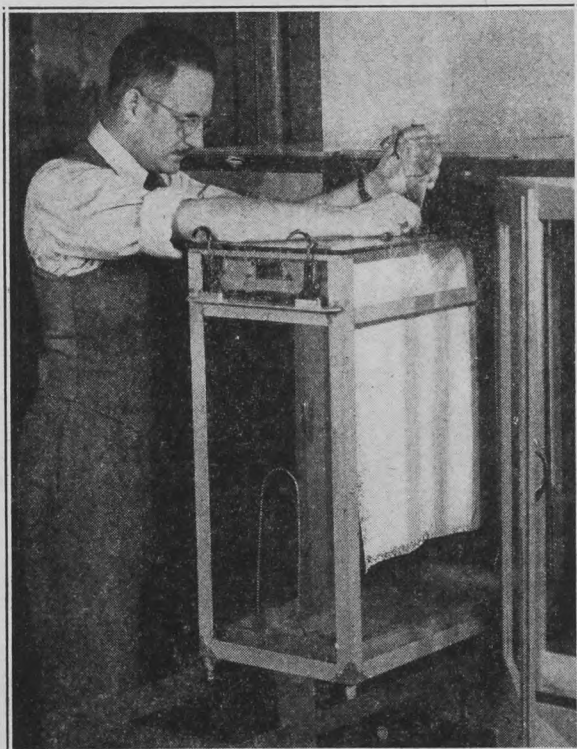
Left: Dr. W. O. S. Meredith determining sugars by a new method called paper chromatography. Right: Mr. M. H. Fisher, the Laboratory's milling and baking expert, studying the extensibility of a dough. The strand of dough on the right is being stretched by the descending hook.

Laboratory continued to expand, until he resigned in 1938, to be succeeded by Dr. Anderson.

At this writing, four of the staff, including the Chief Chemist, hold the highest degree given by any of the universities in Canada or the United States, a Doctor's degree. By 1952 it is expected that this number will be increased to eight, as a result of a program developed by Dr. Anderson in 1940, but interrupted by the war. It is safe to say that with the possible exception of the National Research Council, Ottawa, no other Canadian institution engaged in agricultural research is better equipped, or has more adequately trained personnel than the laboratory which advises the farmers of Canada on the quality of their grain crops and assists the Board of Grain Commissioners in the administration of the Canada Grain Act. "Our aim," says Dr. Anderson, "is to help our western farmers and the Board to maintain and improve the reputation of Canadian grain in the markets of the world."

How Dr. Anderson and his trained staff have been able to do this in the past, and hope to do so to even greater advantage in the future, makes a story which, if told in any detail, would fill at least an entire issue of *The Country Guide*. Each year the Laboratory issues a report, separate from that of the Board of Grain Commissioners, which consists of about 90 pages of printed matter.

The Grain Research Laboratory has five principal functions. These are: (Please turn to page 74)



THE kids called him "Dangerous Dan," and the adjective carried with it their admiration and affection. His real name was Terence Daniel O'Toole Mulvaney. This may have explained his talent for storytelling and an ear, though not much of a voice, for music, but it denoted only a distant and forgotten ancestry in the emerald isle.

Dan drove a truck, in a manner reminiscent of a cowhand on a bronc, for the Sparrow Lake Mining Company. He hauled ore concentrate to the railway station 25 miles away and brought supplies back. He also took the kids—four of them this year—from the camp to the one-room schoolhouse near the railway, and returned them on his second round trip.

He piloted the three-tonner along the narrow and winding mountain road with gusto and always at great speed. The generally accepted theory was that he had a sixth sense that kept him on the road. Be that as it may, his exploits in snowstorm, flood and fog were known the country round, and he'd never had an accident.

He was proud of his reputation. Indeed it was the first and only time that his ability as a driver had been questioned that accounts for our story.

WE begin on a happy note on a morning in October. That is to say, we begin to the tune of Dan's doubtful baritone rendering a slightly corrupted version of "Danny Boy" as he loads the truck with sacks of concentrate at the mill.

He covered the sacks with canvas and rigged up the seats for three of his four passengers. It was a fine sunny morning and still warm enough for the kids to ride outside. All except Billy Svenson, the tram operator's ten-year-old who rode, from choice, in the cab.

He then drew his long rangy frame in behind the driver's wheel, shifted into gear, and shot away in a cloud of dust.

Scorning, as usual, the use of the horn, he gave warning of his pending departure by a series of penetrating war-whoops that brought most of the peaceful residents of the camp to their doors.

This produced the desired result for without appearing to stop, and in less than a minute, he had collected four boisterous wild Indians, all emitting the same blood-curdling yells.

The entire camp drew a collective sigh of relief as the truck rounded the bend in the road and headed south.

After customary greetings of a more civilized nature, Billy Svenson lapsed into an unusual silence. Dan regarded him quizzically.

"Mighty quiet this morning, Bucko," he remarked cheerfully. "Got something on your mind?"

The boy heaved a deep sigh. "Sure have," he said.

Respecting a man's private thoughts, Dan returned to his vocalizing. It was a fine morning and he was in high spirits. Down below the sun glittered jewel-like on the lake and the far mountainside was a riot of green and autumn yellow.

*"As I was g'wine down the road
With a tired mule and a heavy load,
I cracked my whip and the bugle sung,
Says I, good-bye to the wagon tongue.
Turkey in the straw, turkey in . . ."*



"Do you want to see me?" Janet asked. Dan noticed that she had large blue eyes and her hair was the color of yellow birch.

DANGEROUS DAN

Dan drove a truck in a manner reminiscent of a cowhand on a bronc and his exploits were known. He also took the kids to school. He was proud of his reputation and his ability as a driver, which had never been questioned until the new teacher came.

by DAVID HAZELTON

Illustrated by J. H. Petrie

"Dan," Billy said suddenly, cutting in on the chorus. "Dan, you weren't thinking of taking the new school teacher to the dance at the mine next Saturday, were you?"

That brought the song to an abrupt end. "What in the name of tarnation put that thought in your head?" Dan almost shouted.

"Well, I . . ." Billy scratched his mop of curly black hair and avoided Dan's glance. "I just thought it might be a good idea," he said lamely. Then, as if finding a reason, he added, "She's kinda pretty."

Dan laughed. "That might be a pretty good reason for taking a young filly to a dance, Bucko, except that I'm not much interested in the lady sex. Besides, I haven't even met the young woman in question."

"You might come in when you drop us off at the school this morning," the boy said cautiously. "Just to say hello, sort of."

"No thanks, my friend," Dan replied decisively. "I'll leave the ladies to those who can handle them. I reckon that Carl Blakey, the timekeeper, will see that Miss Stephens isn't forgotten when Saturday rolls around."

He returned to his song while the boy slumped back in his seat, a sad and defeated look on his

face. Dan took another look at his silent passenger.

"Why all this sudden interest in the new school m'arm, Bucko? You wouldn't be trying to do some match-making, would you?"

"Of course not!" answered Bill emphatically, affronted at the mere suggestion. "I just thought that maybe Miss Stephens doesn't understand you very well, Dan. I thought maybe you should get acquainted."

"What makes you think she doesn't understand me?" Dan said, looking at the boy curiously. "She doesn't even know me."

"Oh yes, she knows you all right," Billy said. "We told her about you."

"You told her about me? Who's we?"

"Oh just me. And the other kids."

"And what did you say? Nothing I'd be ashamed of, I hope."

"Oh, no, nothing like that, Dan, honest," Billy assured him. "We just told her about you driving us to school, and telling us about wild Indians, and cowboys, and rustlers, and hunting in the woods. And about the songs you taught us. Then she asked us about the truck."

Dan pricked up his ears. "What about the truck?" he said.

"Well, she wanted to know what we did when it rained and how we kept warm in the winter. I told her we all got in front and . . . and, it was nice and warm, and . . . we liked riding with you a lot."

"And what did she say about that?"

"THAT'S just it," the boy said, a worried look in his face. "She didn't seem to like it. She said it wasn't right for us to be coming to school in a truck. And she said it was dangerous, all of us riding in the front seat. Besides, she said . . ." and he gave Dan a quick glance. "She said she'd heard about you and that you were a—a reckless driver."

"Reckless! Me?" Dan exploded.

"Yes. And we said sure you drove fast but that was because you used to be a cowboy and chased rustlers."

Dan's ancestry was distant but not much diluted. "She called me a reckless driver?" he repeated, his voice at a dangerous crescendo.

"Yes, she did. Something like that anyway. And then she said we shouldn't believe all the stories you told us. She said that you just made them up." And then, anxiously, "You didn't, did you, Dan?"

"Of course I didn't!" Dan growled, trying to keep both the truck and himself under control.

Relieved, Billy put his hand on Dan's arm. "She said she was going to see the school board and maybe get

(Please turn to page 58)



BEEES by the BILLION

A farm bred Albertan, who learned the business the hard and painful way, now operates the biggest spread of its kind in the province

by JOHN F CANNING

and P. M. ABEL

SOME years ago a boy with an insatiable curiosity, with the help of a man old enough to know better, cut down a tree in which two swarms of bees had established themselves. If you know anything about bees, you know the kind of reception the enthusiastic wood choppers got. Having no bee equipment, not even veils or a smoker, they had to fight it out to the very end. It speaks well for their courage and determination that they eventually got those whining varmints into the two grocery boxes, which were the nearest they could contrive to be hives.

The boy in the story was Ernest Maunsell-Wybrants of Macleod, Alberta and if you will skip to the last page of the story you will discover that today, 13 years after the tree chopping episode, he is the biggest bee operator in the province, having raised his holdings last year to 3,000 hives.

Maunsell is a name that carries some prestige along the banks of the Old Man River. The bee hunter's grandfather came West with the first mounted police. Under their commanding officer, Lt.-Col. J. F. Macleod, the Mounties taught the whiskey traders and cattle thieves who abounded on the frontier a lesson which earned lasting respect for their uniform. When retirement came, many of the scarlet riders, Maunsell among them, settled within easy reach of the fort named after their leader.

The three Maunsell brothers in the next generation were cattle ranchers. Their operations spanned the golden era of the cow men. Their tremendous, grass-fattened four-year-olds went to Chicago by the trainload. The youngest of the three, George, contracted a marriage with an English lady, which brought an inheritance and a hyphenated name into his branch of the family.

By the time the third generation was ready for the business of making a living, extensive leaseholds



Ernest Maunsell-Wybrants in the role of "Sparks." Left: Sydney Burdge, minus veil or smoker, in a bee yard near Macleod.

were a thing of the past. To the boy who braved the fury of the swarming bees, it looked like a contracting world. His family had been fenced in! His father, brought up in the saddle, was then milking 14 to 18 cows! It was as though the Knights of the Round Table had forsaken the Holy Grail and had taken to herding geese.

AS a school boy Ernest realized that he would have to develop some specialty. He seriously considered high-grade bacon hogs, but his father scotched that idea. The old cow man wouldn't sink that low. Ernest tried a vegetable garden of his own, the produce of which he peddled in town, but it looked like a difficult road to affluence. Then came the tree chopping episode. It fired the boy's imagination, which hasn't entirely cooled off yet. As for his father, it is fairly certain that he regarded beekeeping as a suitable occupation for devout people dedicated to lives of prayer and silence, but no way of making a living for a red blooded man willing to trade knocks with the world. It took a \$2,800 cheque waved in front of him by his exultant son to convert him.

The first bees in the grocery boxes did not create any production records. So Ernest used his vegetable savings to buy a proper hive from a supply house. He made another one like it for his second hive. That summer he gathered 500 pounds of honey and Destiny claimed him for her own.

He began to suspect his own shortcomings as a beekeeper while scooping up his first swarm in the grocery box. But there was a good source of information nearby. Three miles away, on the

outskirts of the town of Macleod, Sydney Burdge, a highly skilled bee man operated an apiary, and Ernest got a job as a learner at the Burdge establishment.

His working day in those years of apprenticeship was a strenuous one. Before breakfast he helped milk the cows and drove them out to pasture. After eating he walked three miles to town, worked all day for the princely wage of \$1.50, and walked the three miles home again in time to help out with the evening milking. After three years, off and on, he was an honor graduate.

IN the years when the young acolyte was working in the vineyard of the master, he was building up an establishment of his own on the side. With the aid of one of his sisters he expanded his original two colonies to 280 in 1941, plus a few more out on shares. In that year he marketed almost 40,000 pounds of honey. The proceeds paid for a business college course for his sister and a course for himself as a radio technician.

By the time the radio course was finished, war-time demands were greedily absorbing all trained men. The S.S. Mount Robson advertised for a radio telegraph operator. Ernest Maunsell-Wybrants applied and was accepted. The apiary was liquidated, and the keeper of the bees became "Sparks," time-honored name for all radio officers in the Merchant Navy.

The Mount Robson plied between Vancouver and New Zealand. It is pretty generally accepted doctrine that sailors in a foreign port are rarely idle fellows. This particular Canadian sailor found that he could be of some use to the Auckland Postal Department, and especially to Miss Marjorie Rafferty of the Mail Delivery Branch. Miss Rafferty reciprocated by coming to Canada at the end of the war as Mrs. Ernest Maunsell-Wybrants to aid in her assistant's re-establishment. Since then two sons, Geoffrey and David, have been added to their menage.

Re-establishment for this family could only mean back to the bees. In 1946 the former student bought out Sydney Burdge, his aforetime tutor. From th's time onward

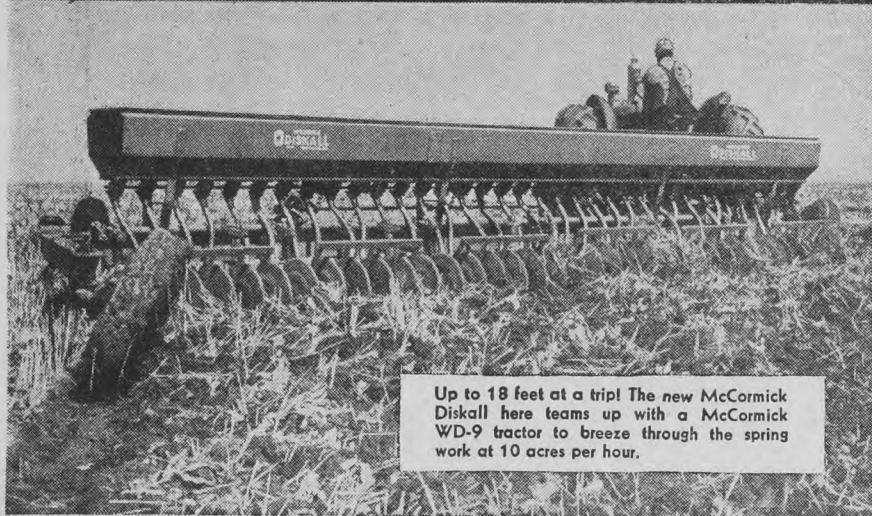
(Please turn to page 30)



Above: Filling cans in Maunsell-Wybrants' modern honey extraction plant at Macleod. Right: One of the trucks refitted for carrying package bees from California to Alberta. It includes sleeping accommodation for the spare driver, for the journey must be non-stop, and arrangements for keeping the 1,000 packages of bees at a constant temperature.



Announcing The McCORMICK DISKALL



Up to 18 feet at a trip! The new McCormick Diskall here teams up with a McCormick WD-9 tractor to breeze through the spring work at 10 acres per hour.

A new...wide...fast tillage tool to boost your profits-per-acre

Now you can work and seed big acreages in one operation — thus saving valuable time and labor when needed most. Only one man is required to prepare and seed an 18-foot strip of field in a single trip! The potential work capacity of the new McCormick Diskall ranges up to 10 acres per hour, depending on the choice of 3 cutting widths—12-, 15- or 18-feet. The low, heavy-duty hitch, with its wide range of adjustments, means efficient operation behind all models of tractors. Pressure lubrication and pneumatic tires mean long life, and minimum draught.

The Diskall is quickly adjustable to various cutting angles to meet varying soil conditions. Constructed for high flexibility to follow the contours of uneven ground, it does a thorough tillage job, leaving no ridges. When equipped with hy-

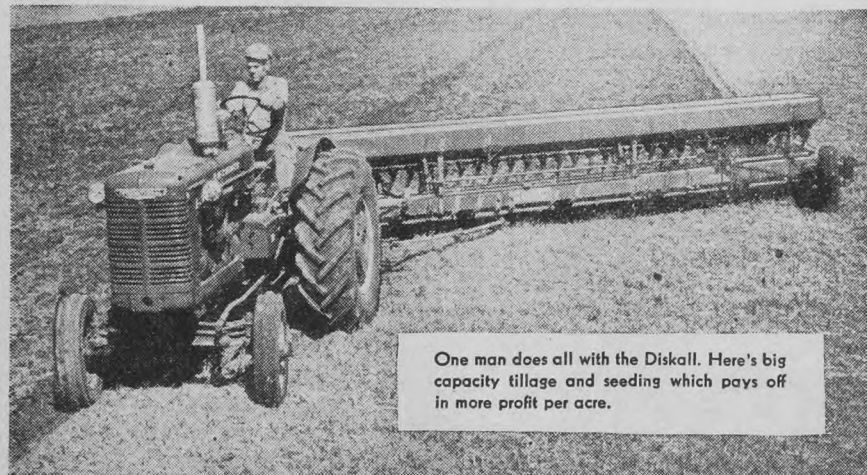
draulic remote control, a flick of the finger raises, lowers and adjusts the Diskall, on the go, right from the tractor seat. Manual control is regular equipment.

The Diskall is quickly converted into transport position. It will pass easily through a 10-foot gate, with room to spare.

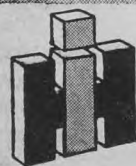
Welded box main frame is typical of the sturdy construction which gives the Diskall plenty of what it takes to stand the gaff.

Seeding attachments incorporating all of the famous McCormick seed drill features are optional equipment on all three sizes.

There'll be far more good field work done in far less time on the farm equipped with a Diskall! Your IH Dealer can give you all the facts firsthand.



One man does all with the Diskall. Here's big capacity tillage and seeding which pays off in more profit per acre.



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B.C.'s 1951 Legislative Menu

Predictions are for a quiet session in the B.C. legislature, but there are some contentious measures which might creep in

by CHAS. L. SHAW

POLITICIANS in these days are invariably beset with troubles and anxieties. But the 1951 session at Victoria does not appear to have anything on the program calculated to try the Premier and his cabinet beyond endurance. It should be a more or less routine session, although that description usually carries an ominous significance when used before the legislators actually take up their year's business. Quite often the sessions expected to be the mildest turn out to be the most spectacular and acrimonious.

There should be enough on the legislative slate to enable the members to earn their sessional indemnity anyway. This brings to mind the fact that the organized school teachers, seeking increased salaries for themselves, have suggested that the members of the legislature should receive \$2,000 more a year as a means of attracting good men to public service. This has caused considerable heated discussion in the newspapers of the province, the main agreement being on the point that good legislators are entitled to more pay but that there aren't enough of them, but there shouldn't be as many legislators in the first place. This may sound rather confusing unless read slowly, but it all boils down to the belief that British Columbia, like other provinces and the nation for that matter, is overgoverned; that it would be a lot better for all concerned, except perhaps the politicians, if there were fewer but better men making the country's laws.

One important event of the legislature will be the presentation for ratification of the agreement signed between the cabinet and the Aluminum Co. of Canada with respect to the latter's waterpower concessions in the Nechako country. Hon. E. T. Kenney, minister of lands, signed the agreement, but he has refused to divulge its details until the house meets. This has been interpreted by the opposition, of course, as an indication that Mr. Kenney has something to hide. Probably the document is a straightforward affair designed to encourage the establishment of what may quite easily become British Columbia's most important single industrial undertaking, but its critics will no doubt maintain that in order to give this encouragement the government has offered to give away too much. This, however, is hardly likely to cause any perturbation on the part of Mr. Kenney, who seems to have fallen heir not only to a job formerly held by the intransigent Mr. Pattullo but to Mr. Pattullo's intransigence.

In the final analysis it may not matter so much what is done at Victoria about the aluminum concessions unless favorable action is taken on the same issue in Washington. B.C. may be willing to sign away important water rights to the company, but if the United States government decides not to buy the finished product of the proposed \$500 million plant, the plant isn't likely to be built—not for some years anyway.

The whole deal was given a cool blast a few weeks ago when Washing-

ton indicated that it didn't want any of B.C.'s aluminum if and when produced, because the United States was boosting its own capacity. Then Trade Minister C. D. Howe went to Washington and in general effect told the authorities that this wasn't a very nice example of the over-all policy of sharing resources between the two countries as had been enunciated only a couple of months ago. Washington is said to have modified its stand as a result of this intercession, but at this moment there are still some elements of uncertainty. If the critical overseas situation worsens, the demand for aluminum will rise enormously, and B.C.'s potential will probably be called upon, notwithstanding the planned expansion in the United States.

THERE is renewed talk of a steel mill for the west coast, too. This time British Columbia's minister of mines, R. C. McDonald, is the spokesman, and he claims that some sinister influence, presumably in the East, has been holding up logical development. The minister has been asked to be more specific, but so far he hasn't named names.

No doubt exists as to the prevalence of satisfactory iron ore in considerable volume at accessible points on the coast, notably at Texada Island, Quinsam and Zeballos. The catch in the past has been whether the market was sufficiently large to absorb at a profit the output of a fully integrated plant. There is some negative feeling, especially among businessmen who are more inclined to analyze the economics of the proposal. But there is strong support for a steel industry on the part of those who believe that such a development will stimulate the whole industrial fabric west of the Rockies, and who claim that B.C. missed the boat several years ago by hesitating while Henry Kaiser built his steel mill at Fontana, California, and other interests became established at Provo, Utah.

However, with B.C.'s population up 40 per cent since the last census in 1941, it seems only a question of time before steel and a host of other major industries will materialize before long. The suggestion has been made that the time has come when a judicial committee should survey the iron and steel situation in B.C., just as was done a few years ago, with beneficial effect, regarding forest resources.

PROBLEMS of the fruit growers were to be given a thorough airing at the annual meeting of their association in Vernon in January, and one matter on which they were expected to take a pretty definite stand was freight rates.

The growers prepared to tackle the issue from several angles. One was that it is no longer profitable to market "Cee" grade apples at a price which consumers can afford to pay, and that this is due almost entirely to the rise in freight charges. Another is that some commodities are carried by the railroads at less than cost so that actually the railroads' earnings from fruit help to subsidize the shipments (Please turn to page 79)

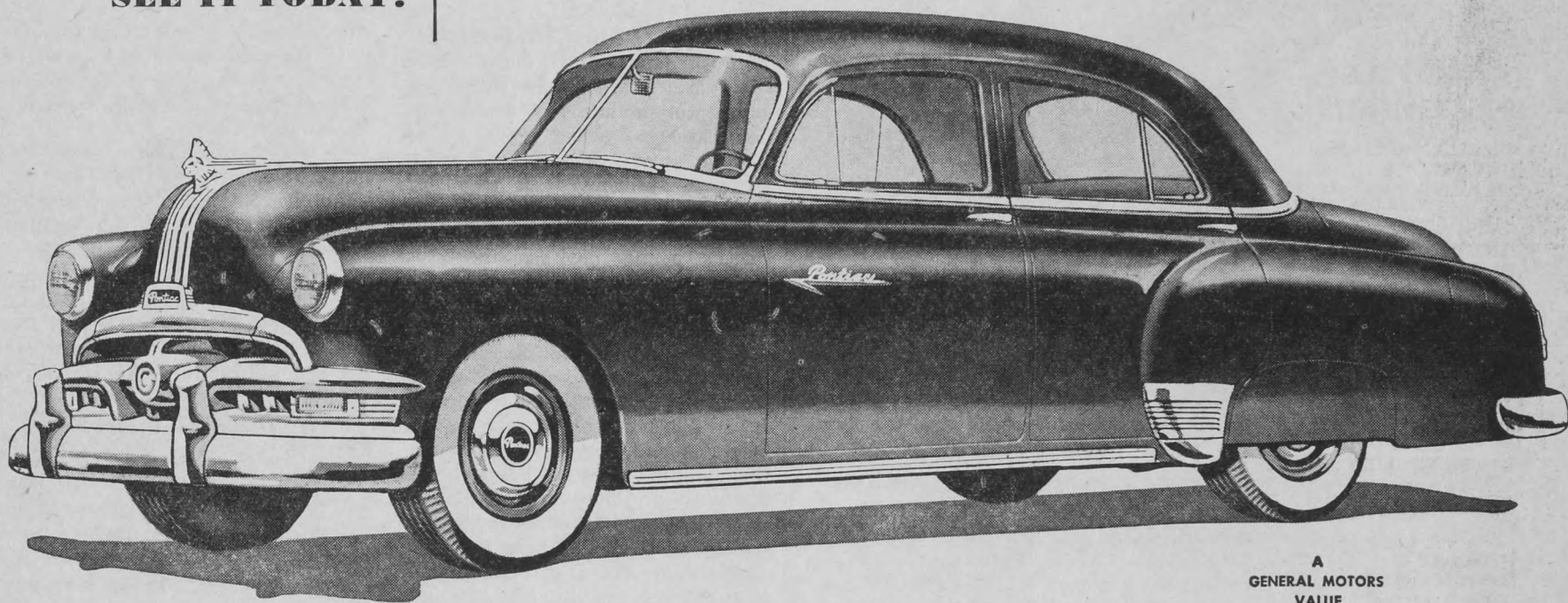
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SENSATIONAL NEW AUTOMATIC
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New automatic driving comes to the low-price field! In all 1951 Pontiac Fleetleader Deluxe models you can have the wonderful ease and smoothness of POWERGLIDE—a proved, completely automatic transmission. There is no clutch pedal. And POWERGLIDE's easy on your car as well as on you! In normal driving no gears ever shift, for POWERGLIDE is a torque converter drive. Wear is reduced, efficiency increased. Your car's life is longer, its trade-in value higher!

POWERGLIDE is optional equipment at extra cost on Fleetleader Deluxe models.

THE MOST BEAUTIFUL THING ON WHEELS . . .
with distinctive new Gull-Wing Styling!

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POWERGLIDE on Fleetleader Deluxe, HYDRA-MATIC
Drive on Chieftain and Streamliner.

SILVER STREAK PERFORMANCE . . . two engines,
powerful straight eight or dependable, economi-
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LUXURIOUS NEW INTERIORS . . . beautiful new
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TREATMENT . . . protected by massive wrap-
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BODIES BY FISHER . . . strong, rugged, beauti-
fully styled and built of all steel.

EYE CONTROL INSTRUMENTS . . . entire panel
easy to see, easy to read.

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PACK-AWAY TRUNK . . . extra-large, fully-lined
with self-locking counter-balanced lid.

BUILT TO LAST 100,000 MILES . . . in the Pontiac
tradition of economical, dependable service for a
long, long time!



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AUTOMATIC TRANSMISSION
NOW MADE EVEN FINER!

HYDRA-MATIC, the automatic drive that has been acclaimed by motorists for over ten years can be yours on any 1951 Pontiac Chieftain or Streamliner. Step on the gas to go, step on the brake to stop—that's all you do in normal driving with HYDRA-MATIC, the drive that has outmoded the clutch pedal entirely! And this year it features new Instant Reverse! HYDRA-MATIC is an automatic transmission plus a fluid drive . . . that's the secret of HYDRA-MATIC's flashing performance, amazing smoothness, wonderful driving ease! HYDRA-MATIC DRIVE is optional equipment at extra cost on Chieftain and Streamliner models only.

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STANDARD EQUIPMENT ON ALL HORN-DRAULIC LOADERS.

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Adjustable pitch for controlled grading, clearing and leveling.

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For bulk loading, HORN-DRAULIC features 2 sizes—60" (17½ cubic ft.) or 80" (21 cubic ft.)

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With reversible cutting edge designed for "dirt work." (6 or 9½ cubic ft. capacity).

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Gathers, Lifts and Stacks—makes haying a one-man operation.

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Gathers, Lifts and Dumps—8' x 10' capacity—Steel-tipped wooden teeth.

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For controlled lifting, loading and dumping, a compact hydraulic control.

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An economical aid to general leveling, clearing, filling and dozing operation.

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For high hoisting and lifting, the telescoping boom is easily installed.

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Combined with Loader Boom, a sure way to handle stack feeding problems.

Regardless of your tractor type, there is a Horn-Draulic Loader for your tractor

Row Crop, Large Standard, Conversion, Small Standard or Track type, there is a HORN-DRAULIC LOADER FOR YOU! One price!—One Compact unit!—4 Pins mount or dismount HORN-DRAULIC!—Engineered for years of heavy duty service, HORN-DRAULIC will meet your every requirement.

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News of Agriculture



His Majesty King George VI inspects his reserve champion Shorthorn steer at the recent Smithfield Show in London.

Sask. Quotas Removed

AS of January 11, the Canadian Wheat Board has permitted Saskatchewan producers of wheat, oats, and barley to deliver grain to any elevator at any delivery point where space is available. It is stipulated, however, that all deliveries of these grains must be recorded in the producer's permit book in the usual manner.

In making this announcement, the Wheat Board recognized that there was not, and is not, sufficient space in country elevators to provide storage for all the grain still to be delivered. It was felt, however, that the removal of quota and delivery point restrictions, would permit Saskatchewan producers to deliver at least some grain, which might otherwise have to remain on the ground, or in poor storage facilities, and thus be more likely to spoil.

The Wheat Board is very anxious that this removal of quota and delivery restrictions cause as little confusion as possible, and has strongly advised producers to contact the elevator agent where they hope to deliver grain, in order to make sure before going to the expense of hauling, that he is in a position to handle the extra grain. For the same reason, the Board has expressed the hope that elevator agents would give preference for a few weeks to producers, who, because of previous quota restrictions, have not been able to deliver more than limited quantities of grain during the crop year to date.

The situation everywhere is recognized as extremely serious, especially where tough or damp grain is involved. Terminal elevators have only very limited drying facilities and the railroads are only able to move a certain number of carloads of grain out of country elevators and into terminals daily.

The Country Guide would like to add a note of warning and caution to readers who have undelivered grain. If your grain is likely to grade below the milling grades, say, 5, 6 and feed, and if it is now dry and safely stored, it may be of very great help to your neighbors if you do not deliver it to elevators already short of space. On the other hand, if grain is likely to grade tough or damp, it would be prudent to do whatever can be done about it immediately. Any space available within hauling distance should be utilized, but failing this, each farmer

situated so that he is likely to suffer loss from spoilage should exercise his ingenuity to the utmost in order to keep spoiling from actually occurring, if this is at all possible. Perhaps in some instances, community action will be feasible.

Another precaution! Tough or damp grain may heat, even in cold weather, especially if insects infest it. A crust on top of piled wheat would indicate that this has happened, and that the grain below may be heated. At the first sign of this, move it somewhere, if it is only to turn it over.

Manitoba Co-operation

THE earliest Acts incorporating or registering co-operatives in Canada go back almost to the time of Confederation. The early organizations, however, were few in number and almost none are still in operation. Many have changed name, or changed the nature of their businesses, and some have been amalgamated with, or incorporated into others. A recent survey by the Economics Division of the Federal Department of Agriculture, revealed that in 1948 there were 3,553 co-operatives registered or incorporated in this country; and that the longest period of marked activity in co-operative organization was between 1936 and 1948, when 2,439 co-operatives came into existence. The most active of these years was the five-year period from 1941 to 1945 during which 976 co-operatives were organized.

The second annual report of the Co-operative Services Branch of the Manitoba Department of Agriculture, issued in December, revealed that for the year ending July 31, 1950, there were 391 commercial co-operatives incorporated in Manitoba. These, in addition to 33 non-commercial co-operatives, gives a grand total of 424 co-operative associations registered in the province.

These figures represent a growth of 63 years by the co-operative movement, the first provincial Act having been passed in 1887. As of last July, the commercial co-operatives, with a combined membership of 89,844, did a combined business of \$92,170,976, of which \$73.3 million was contributed by the grain and seed co-operatives. The membership of merchandising co-operatives was 57,591, and here 154 associations did a business of \$22,635,718.

MACDONALD'S BRIER

Canada's Standard Smoke

Battle for Better Living

BRITAIN today, and for years past, has carried an exceptionally heavy personal income tax, which takes as much as 95 cents out of every dollar of income from well-to-do people. Government revenue from personal income tax, therefore, is high. Nearly one-third of total income tax revenue goes to pay consumer food subsidies, which amount to some 246 million pounds per year on home-produced food and on imported food a further 164 million pounds. Putting this cost of consumers' subsidies in another way, it now takes nearly half of all that British export industries can earn in the midst of an all-out export drive, to pay for the food Britain must buy abroad. At present, British farmers produce half the carcass meat needed by the British people.

These facts were presented some time ago to the Farmers' Club in London, by Sir James Turner, President of the National Farmers' Union of England and Wales. Sir James was discussing what he called Britain's "battle for better living." He was urging producer marketing schemes, which he believed to be the best method of cutting down the margin between producers' and consumers' prices, thus reducing the burden of consumer subsidies.

As reported in The Farming News, Sir James believed that a full use of British agricultural resources would result in increasing home production of carcass meat by one-third to one-half. Increasing the average milk production per cow from 6,000 to 7,000 pounds per year, would produce an additional 3.75 billion pounds of milk without any increase in the number of cows. British pig production is only about 71 per cent of pre-war, while the 1952 target figure is 92 per cent of pre-war. Home production of vegetables, by value, is only about one-sixth of total consumption, the balance being imported from the continent.

Prices Support Board

SOME time ago L. E. Pharis, Magrath, Alberta, a member of the Advisory Committee to the Agricultural Prices Support Board, told the Farmers' Union of Alberta that, during the year 1949-50 the Agricultural Prices Support Board received its first real test in major commodity lines. "Prior to this time," he said, "only minor commodities had been assisted. For the first time the Board was involved in large-scale distribution problems. It handled almost 50 million pounds of butter for our domestic market, stored 396,000 cases of eggs, purchased 21 million pounds of cheese, and more than one million dollars worth of dried skim milk products.

"The potato growers have received \$1,750,000 and apple growers \$9,500,000 in the past five years. The apple and potato growers are really organized and our western farmers could well take lessons from them and the beet growers. Growers of white beans in Ontario received \$194,000 and Canadian honey producers, \$3,000,000. A subsidy of three cents a pound was paid on cheese, 3½ cents on bacon delivered under contract . . . (and) . . . in the past year stocks of butter, cheese and eggs purchased amounted to many millions.

"While there are some who charge the Board with doing too little and too late, it is my belief that this pro-

gram has, during a transitional period, done a great deal to stabilize our Canadian economy. If farmers would set up their own marketing boards, backed by this type of government assistance, it would be of great value to the stabilization of our price structure."

Saddlemaking

THE best saddle seats are made of pigskins. British saddlemakers, it is said, were well established in London, England, by the year 1115. This long-gone period, incidentally was exactly 100 years before the signing of Magna Charta, or the Crusades of King Richard the Lion-Hearted, which occurred shortly before.

Apprentices to the saddler's craft spend five years learning their trade, and say that the best pigskins come from Scotland. Canada is said to be one of the best markets for London-made saddles, though more saddles are produced in the town of Walsall, Staffordshire, than in London. The London saddlemakers have a wider reputation, probably because the Worshipful Company of Saddlers established their reputation in the first place by enforcing a very rigorous examination of all the products of its members. Any member found to be producing inferior saddles had them confiscated by the Officers of the Company, who took them into the street in front of his shop and burned them.

Postwar European Production

THE Office of Foreign Agricultural Relations in the United States Department of Agriculture recently made a study of European agricultural production during the years 1948-49, 1949-50 and 1950-51. These three years followed a year of low farm output in 1947-48. O.F.A.R. concludes that the increase in output since 1947-48 has been due not alone to favorable weather, but to basic recovery and improvement. This includes greater use of fertilizer and mechanization, improved seed, cultivation, pest control and more efficient feeding.

The following figures in brackets following each separate country show, first, the index figure for gross agricultural production in 1949-50, and, second, net agricultural production after excluding the value of imported feed. Figures in all cases compare with the figure of 100 representing farm production pre-war. Countries are listed alphabetically: Austria (gross production 80-net production 82); Belgium (105-118); Denmark (109-115); France (101-103); Western Germany (93-93); Greece (106-106); Ireland (99-100); Italy (103-102); Netherlands (108-119); Norway (109-114); Sweden (124-127); Switzerland (102-102); Turkey (112-112); United Kingdom (111-136).

Pliofilm-Wrapped Cheese

THREE dairy factories in New Zealand have been experimenting with one-pound blocks of cheddar cheese, manufactured as such and sold in printed and sealed pliofilm wrappings. The process is more costly and lengthier than the usual process of manufacturing cheddar in cheeses of about 80 pounds each. The pound blocks of cheese are sold in units of 20 packed in cartons. When marketed the cheese is without rind or crust, and is three to four months old.

NOW-more than ever WEED-NO-MORE "80" is your best buy COSTS NO MORE THAN OTHERS per pound of acid

BIG NEWS for every Canadian grain grower! Weed-No-More "80", the premium weedkiller, now costs you no more than others per pound of acid. Because we're selling more and more Weed-No-More "80", it costs less to produce. We're passing the saving on to you!

Buy Weed-No-More "80" now. It's the weed-killer with the special formulation—proved best for quick kill, safety and efficiency. Weed-No-More "80" enters weed leaves quickly . . . rainfall a few minutes after application cannot wash it off. It kills faster! It's safe . . . will not harm your crops when used according to directions.

Don't gamble. Kill weeds in your wheat, corn, oats, barley and flax with Weed-No-More "80", proved best on millions of acres of Canadian grain. Last year, Weed-No-More "80" was used on one out of every four acres treated in Western Canada.

BUY NOW-HERE'S WHY!

We have plenty of Weed-No-More "80" right now. However, some of the ingredients may be in short supply later in the season. So, buy now and be sure. Weed-No-More "80" will keep in perfect condition until you are ready to use it.



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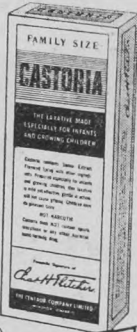
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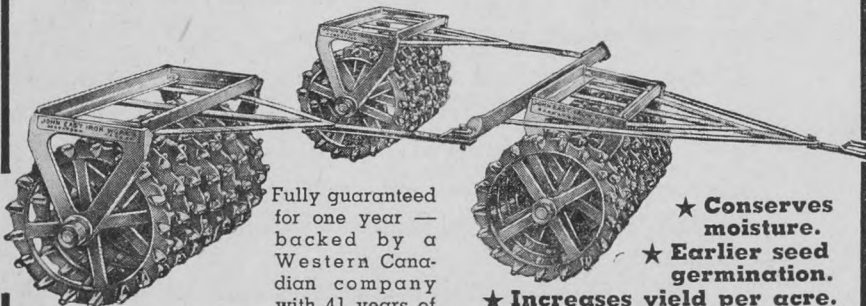


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Fully guaranteed for one year — backed by a Western Canadian company with 41 years of experience in looking after the needs of Western farmers.

- ★ Conserves moisture.
- ★ Earlier seed germination.
- ★ Increases yield per acre.
- ★ Reduces soil drift.
- ★ Pays big dividends.

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FRAME—heavy angle steel—avoids wheel breakage.
AXLE—1½-inch diameter—a good axle—backbone of the packer.
BEARINGS—heavy type—removable—guaranteed one year.
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FRAMES—All "JE" Utility Packers available in either low frame or high frame.
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Get It at a Glance

Happenings in Canadian and world agriculture

IT is probable that crop failure payments under the Prairie Farm Assistance Act for the 1950 crop year may not amount to more than about half of the high 1949 figure of \$22,000,000. One difficulty in estimating payments has been the large percentage of unthreshed grain for which the crop yield could not be determined.

THE Commodity Credit Corporation (U.S.) reports a net realized loss at the end of November, 1950, of \$100,281,000 since the beginning of the fiscal year, July 1, 1950. The net realized loss from the C.C.C. price-support operations for the year ended June 30, 1950, was \$249,230,000.

THE European Corn Borer has been moving westward in recent years. It was first reported in North Dakota in 1946, and by 1950 had spread into 38 counties.

THE British journal, *Power Farmer*, reports that the first general-purpose British farm tractor was designed in the year 1900. It was a six h.p., single cylinder engine named the Ivel tractor, and able to handle a two-furrow plow and provide power for mowing, reaping, binding, chaff cutting and hauling. It is said to have aroused world-wide interest.

IN 1950 some 9,756,389 dozens of eggs were marketed through Saskatchewan registered egg-grading stations. This was less than 75 per cent of the quantity handled by the egg grading stations in 1949. Last year, however, 34.8 per cent graded A Large, as compared with 31.2 per cent the year before.

BACON production costs in Denmark, estimated to be 11 per cent higher than a year ago, have brought an increase in the British price for Danish bacon from approximately \$32 to \$34 per hundredweight (112 pounds), January 1 to September 30, 1951.

UNFAVORABLE weather conditions in the United States this year, if continued, may mean that Canadian plant breeders and plant pathologists will have additional time in which to breed new wheat varieties resistant to the virulent strain of wheat stem rust known as 15B.

MEXICO is expected to sell about 75 million pounds of meat per year in the United States, following the lifting of the ban against Mexican meat which has existed for some time. One result may be that the sale of Argentine canned meat in the United States will be curtailed.

WHEAT production in Argentina during the past three years has been as follows: 191 million bushels in 1948; 189 million bushels in 1949; and a 1950 crop estimated at about 220 million bushels.

BY November, 1950, the index numbers of the prices of agricultural products at the farm had dropped eight points from November, 1949, or from 247.8 (1935-39 equals 100) to 239.8 last November. The index figure held steady during both October and November, 1950.

PRICE controls on agricultural commodities in the United States are being fought by the American Farm Bureau Federation, on the ground that such controls would decrease farm output, encourage black markets in meats and other products, and should not be used except as a last expedient in a long-time total war.

PRINCE EDWARD ISLAND has nearly 85 per cent of its land suitable for some type of agriculture. Nearly 60 per cent is suitable for general farming.

A BRITISH company has developed a conversion by which in three or four hours, unskilled labor may convert a normal combine, either self-propelled, or driven by power take-off, or engine, to a forage harvester, without drilling extra holes in the combine. When the conversion is completed the outfit is complete with cutter blower mechanism able to handle silage and other crops.

BACTERIAL wilt of alfalfa was first observed in British Columbia some years ago. It is now present in all western provinces and was reported for the first time in Quebec last summer.

ALL three of Alberta's sugar factories (Raymond, Taber and Picture Butte), wound up operations before the first of January, Taber opened in the fall of 1950, sliced 161,000 tons of beets; Raymond, 137,000 tons, as compared with 150,000 tons in 1949; and Picture Butte, 147,000 tons, as compared with 171,000 tons the year before.

THE United States Department of Agriculture recently sold to the Italian government through F.A.O., 5.5 million pounds of surplus government-owned butter at a price reported to be 15 cents per pound.

AS of July 1, 1951, corn and wheat will be supported in the United States at 90 per cent of parity, and it was announced in early January that there would be no acreage limitations for either crop this year. The national average of price-support for wheat will not be less than \$1.99 per bushel, and may be higher if parity increases by the beginning of the 1951-52 marketing year.

DURING the month of October, 1950, export licences were issued by the British Ministry of Agriculture covering 95 Shorthorn cattle bound for Canada.

IN 1950 approximately 1,400,000,000 pounds of vegetables of 14 different kinds were produced in Canada for commercial purposes, including canning. Of this amount more than one-third consisted of tomatoes, largely produced in the province of Ontario. The five principal commercial vegetables in order of their importance are: tomatoes, sweet corn, carrots, onions and cabbage.

IN the State of Kansas, four wheat varieties, Pawnee, Comanche, Wichita and Triumph now account for 76 per cent of the total Kansas acreage. Not one of these varieties was grown six years ago.

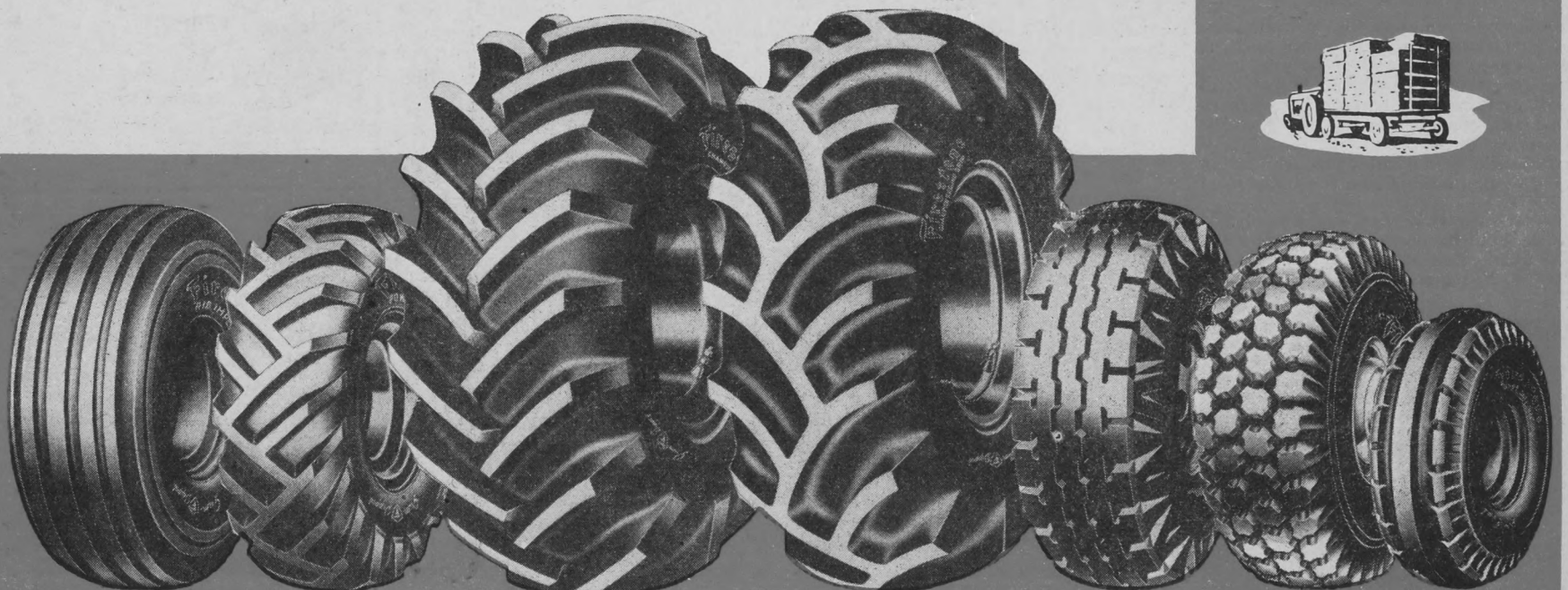
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For your tractor... for your truck... for your car, and for every other farm use, there is a Firestone tire engineered and built to do the job-- and to do it better than any other tire made.

There are certain definite reasons why Firestone tires perform better and last longer. One is Firestone's understanding of farm tire requirements based on years of experience in the farm tire field. Another is the never-ending Firestone research and development program to

build the best today--and make it still better tomorrow. And still another vitally important reason for the superiority of Firestone tires is the fact that they are built by the finest craftsmen using the finest materials that science and machines can produce.

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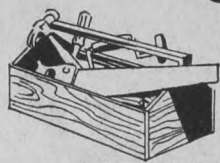
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PRACTICAL HINTS
ON MATERIALS AND METHODS

Just as a bank carefully deliberates on its investments, a practical farmer considers the cost of any modernization on the basis of cash returns. Take insulation, for instance. Sure, it's going to be wonderful to have both house and barn cosy and warm in the winter and degrees cooler in summer. But if that was all, well, luxuries are fine if you can afford them!

INSULATION PAYS LIFETIME DIVIDENDS

Government experimental farms have proved beyond question that cows give more milk, stay healthier and actually require less food where barns were properly insulated and ventilated. A two-month test showed that one farmer was losing \$4.81 a day for lack of these two essentials. Thus, 12 indoor months were costing him \$1,755.65! And this figure doesn't allow for possible loss of stock due to cold and drafty conditions.



BIGGER POULTRY PROFITS TOO

Every farmer knows that sudden changes in temperature will cut down egg production and often cause sickness in the flock. Johns-Manville Rock Wool Insulation does much to reduce these seasonal losses.

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These 24 steers brought the top of \$29.75 per cwt. to Oscar Peterson, at the Lea Park Cattleman's Association Community Auction Sale, Alta., in November.

Wheat as Livestock Feed

WHENEVER the crop of any year is comparatively low-grade, or suffers extensively from damage, such as the frost of 1950, it becomes much more economical and desirable to feed larger quantities of wheat to livestock. Wheat could probably be fed with reasonable profit in almost any year, but since it grades relatively high in most years and commands higher prices for the good milling wheat of the higher grades, it is much more sensible and economical to use the coarse grains for feeding, except when low grades of wheat are plentiful and price spreads fairly wide.

Wheat is quite as palatable as oats and barley to livestock, but there are a few points to remember about it. It is usually higher in protein than oats and barley and, especially if the kernels have been somewhat shriveled from frost, its protein is likely to be quite high, and its starch quite low. For pigs, therefore, such shriveled wheat is more suitable for growing pigs, than for those at the fattening stage of production. Wheat is a high energy feed and is somewhat more inclined to put over-finish on pigs than barley, so that it should very seldom, if ever, be fed as the sole grain in the ration, and should always be fed along with adequate protein and mineral supplements, in order to secure a higher gain and a higher feed efficiency. When ground, as it should always be when fed, it has a tendency to form doughy masses in the stomach of the pig, which can lead to such troubles as colic, bloat, going off feed, etc. Grinding, therefore, should be coarse for cattle, and not very fine for pigs. There is also danger of over-feeding wheat, so that wheat should always be fed by weight and not by measure.

Wheat ranks high as a feed for swine because it has a low fibre content. The danger of over-finishing during the fattening process can be lessened by adding to the concentrate, from 10 to 15 per cent by weight of oat hulls, straw or alfalfa, hammered fine, and given after the pigs reach, say, 160 pounds live weight. This slows up the fattening process. Another method is to feed a mixture of wheat and oat chop, which achieves the same purpose. Wheat weighing about 52 pounds per bushel appears to give better results when combined with the protein-mineral supplement, than wheat of lower or higher bushel

weights. The Experimental Station at Melfort, Saskatchewan, suggests that Nos. 5 and 6 wheat or barley may be mixed with badly frozen wheat, and a better feed obtained. By this method the pigs can handle frozen grain more satisfactorily.

Since wheat is primarily a fattening feed, it can be used to good advantage for cattle, either of beef or dairy breeding. Under most circumstances it is safer to feed it to beef cattle along with bulkier feeds such as oats. When this is done, a fairly high percentage of oats or bran should be included in the mixture at first, gradually increasing the proportion and amount of wheat later. It can also be used for wintering beef cows, along with roughage of low quality. A small amount of wheat fed alone or in combination with oats or chaffed roughage will give good results.

Wheat can be used to replace barley, for milking cows, but either grain will give better results if fed in combination with oats. The University of Saskatchewan reports successful use of a mixture of four parts oats, four parts wheat and one part of oil cake. Wheat is also useful for cutting down the use of costly high protein feeds when fairly good legume hay such as sweet clover or alfalfa forms all or the major part of the roughage fed to dairy cows. Under such circumstances, the cereal grains, including wheat, can be used more generously, and high protein feeds less generously.

Much the same is true of the use of low grade wheat for sheep, although it is usually fed to them unground, which is satisfactory except for the hard, milling grades of wheat. Where cheap or low grade wheat is available, a mixture of equal parts by weight of oats and wheat is suitable. The higher the proportion of legume hay in the roughage, the greater the amount of wheat that can be used satisfactorily.

Docking and Castrating

SEVERAL choices of methods and times for the successful docking and castrating of lambs are available. For the last two years at the Range Experiment Station, Manyberries, Alberta, tests have been made between the use of the knife and the elastrator, for castrating and docking, both at birth and at 14 days old. It is reported that the elastrator is a cleaner method, but that the knife is quicker and seems to cause less suffering.

For farmers with only a few sheep, there might be an additional advan-

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tage with the elastrator in that one man can do the job alone. The tests at Manyberries, however, indicated that the use of the elastrator at 14 days of age was the poorest way to do it, and the use of a knife for castrating and docking at 14 days old was the best method, in that the average weight of lambs, both male and female, in early August, was about six pounds higher for the males and nearly 11 pounds greater for the females. When these two methods were tried out at birth, both gave about the same results in both years.

Ontario Grass Demonstration

THERE appears to be a considerable quantity of Ontario farm land, where the pasture value of land has been declining due to neglect. The Ontario Department of Agriculture proposes to rent several farms in different localities in Ontario, and operate them for five years in order to demonstrate the increased carrying capacity secured as a result of controlled pasture management.

These farms will probably be 100-acre farms valued at \$35 to \$40 per acre on which the present carrying capacity is from 18 to 20 cattle per 100 acres, from about May 10 to about October 30. The current rental value of such land at present is estimated at \$1 to \$1.50 per acre.

The farms will be divided into three fields of approximately 30 acres each, one of which will act as a check, and will have an estimated carrying capacity of seven head of cattle. The second 30-acre field will be given a fertilizer treatment only, at the rate of about 500 pounds once in three years. It is estimated that this will produce a carrying capacity of about 15 head, or about one head for each two acres. The third 30-acre field will be broken up, reseeded and fertilized in the same way as the second field. Reseeding is expected to increase the carrying capacity to one head for each one-and-a-half acres. Some Ontario owners of such land have followed this procedure with success, and it is reported that the rental value for these grass lands when improved is around \$4 to \$5 per acre.

Beef Performance Tests

BEEF cattle are now following dairy cattle, swine and poultry in being subjected to performance testing and selection. Today it is not necessary to buy purebred dairy cattle or bacon-type hogs or poultry, for breeding purposes, without information as to the performance-testing of close relatives of the animal intended for use. This was a long and constructive step away from judging the quality of an animal largely on type and conformation. As F. J. Kristjansson, Animal Husbandry Division, Central Experimental Farm, Ottawa, put it not long ago: "The commercial producer is becoming increasingly aware that a certain type of horn, or a certain shade of color does not add to the market value of a steer," and he reports that some private breeders in the United States are now starting to test their beef cattle herds along performance lines.

Most of the methods of performance-testing with beef cattle are being developed and studied by research institutions. So far the best method evolved is approximately as follows:

All females which fail to produce

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- ① Controls smuts
- ② Protects against root-rots

CERESAN M not only kills smut spores on the seed, but also forms a protective film around the seed which resists the attacks of soil-borne diseases. That's because **CERESAN M** is a mercury formulation . . . and *only* a mercurial seed disinfectant gives your seed this two-way protection. Likewise, a mercurial is the only seed disinfectant which will improve germination, especially of frosted seed.

STOPS SMUTS IN ALL GRAINS

CERESAN M controls stinking smut (bunt) of wheat, loose and covered smuts of oats, covered and black loose smuts of barley, stinking and stem smuts of rye.

A superior action is obtained, as **CERESAN M** vapourizes and the mercury vapour completely destroys the smut spores on every kernel. So thorough is the action that the vapour even kills spores under the seed coats of oats and barley.

SOIL-BORNE DISEASES LOWER YIELDS

Root-rots and other soil-borne diseases are a very real menace to your crop. By killing and stunting seedlings, the stand is thinned and weakened which results in lower yields. **CERESAN M** protects your seedlings from the ravages of soil-borne enemies as well as giving superior smut control.

30% INCREASE IN EMERGENCE FROM FROSTED SEED

Unlike some disinfectants which often reduce germination, **CERESAN M** actually improves the germination of all your seed. This is especi-

ally true of damaged or weakened seed. Seed damaged by frost shows an increased emergence or stand of up to 30% when treated with **CERESAN M**.

TREATMENT COSTS ONLY 3¢ TO 4¢ PER ACRE

CERESAN M is a low-cost crop insurance against losses caused by smuts and soil-borne diseases. A few cents invested pays you back dollars in bigger yields, cleaner grain—no smut dockage.

• • •

This year and every year, treat all your seed with the disinfectant that protects *all* types of grain against both smuts and root-rot. Ask your farm supply store for **CERESAN M**.

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- 2 Stops smuts in *all* types of grain.
- 3 Protects seed against root-rots and other soil-borne diseases.
- 4 Up to 30% increase of emergence or stand from frosted seed—improves germination of all good seed.
- 5 You need buy only one seed disinfectant, as **CERESAN M** treats all seed grain and also flax.



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enough milk to develop a calf in a satisfactory manner are culled. All the young stock is reared under the same conditions, so that a comparison can be made. This is followed by a feeding test in which all animals are fed right through to market weight. These tests, together with the keeping of records, which include birth weights, weaning weights and weights at the beginning and end of the feeding test, in addition to a policy of weaning at standard ages or weights, make it possible to compare the progeny of different sires and dams within the group under test.

As a matter of practice, each animal is rated for conformation at weaning time and also at the end of the feeding period. Animals may be individually fed and a record kept of the amount of feed consumed by each. When all of the information is in hand it is possible to decide what animals to keep for breeding. Generally these are the ones that gain the fastest on the least amount of feed and are of desirable conformation. All others are sold on the market.

In the United States, tests have shown that bulls may be put on a feeding test just the same as heifers and steers, and the results of such tests used to decide whether or not the bull should be kept for breeding purposes.

T.B. Testing

CANADA began paying compensation to owners of cattle slaughtered as reactors to the tuberculin test for bovine tuberculosis in 1915-16, during which fiscal year \$3,144 represented the total cost of compensation. The peak year was reached in 1930-31, when for this disease alone \$1,369,165 was paid from the Dominion treasury. During the entire 35-year period ending March 31, 1950, compensation of more than a million dollars was paid in each of five years, including the last two fiscal years. For the fiscal year 1949-50 the cost was \$1,332,974. During each of the last two years more than 31,000 head of cattle have been slaughtered, as compared with 36,378 in the peak year of 1930-31. A part of the heavy cost during the past two years has been due to an amendment to the Animal Contagious Diseases Act, retroactive to April 1, 1947, by which full compensation is provided to owners of cattle, the carcasses of which, on slaughter, were without salvage value.

Dr. T. Childs, Veterinary Director-General, in his last annual report, comments favorably on the progress made in the eradication of bovine tuberculosis. He found the ratio of reactors to the total number tested; to have shown a satisfactory decline during the year 1949-50, and adds: "It is now apparent that the worst areas of infection have been eliminated and that a steady decline in the ratio of tuberculous cattle to the total number tested may be expected henceforth." Dr. Childs estimated that approximately 3,000,000 cattle will have been tested during the present fiscal year 1950-51 in the development of the Restricted Area, and Accredited Herd Plans. There were already 454 restricted areas in Canada, of which 159 were fully accredited by March 31, 1950.

Under the Accredited Herd Plan, 342,953 cattle were tested last year, of which the number of reactors was

928, or only .27 per cent. Nearly three-quarters of all cattle tested under this plan were in Ontario, which provided 240,937 cattle, of which 892 or .37 per cent were reactors.

Dr. Childs reports that during the year, 1,969,216 cattle were tested under the Restricted Area Plan. Under this plan the required percentage of cattle owners petition for the institution of the plan, and when the area is completely free, as a result of repeated testings, it is fully accredited, or tuberculosis-free. Meanwhile, no infected cattle may be brought into the area.

From the statistical material submitted by Dr. Childs it would appear that Manitoba was the first province in Canada to take advantage of the Restricted Area Plan. In 1923, testing began in the rural municipalities of Dufferin, Portage la Prairie, Roland and Thompson. Three Quebec counties followed in 1924, three Prince Edward Island counties in 1925, six Saskatchewan rural municipalities and the Fraser Valley district in British Columbia in 1926, Prince Edward County in Ontario in 1927, together with 14 Nova Scotia counties in the same year. These were joined by three New Brunswick counties in 1930, after which there was a long gap until 1939 when the municipal district of Strathcona became the first Alberta area to enter this plan.

In Manitoba the first four municipalities to enter the Restricted Area Plan, revealed an undesirable, but not particularly high percentage of reactors. Three of them showed 5.56 per cent reactors, and the fourth 7.2 per cent. The entrance into the plan, of the municipalities adjacent to the large Winnipeg city milk market, later revealed a much higher percentage of infection. The rural municipality of Transcona, which did not enter the plan until nearly 20 years later showed 47 per cent reactors, although the number of cattle was less than 500. Of approximately a score of rural municipalities lying within the Winnipeg milk shed, none showed under ten per cent reactors, 12 recorded more than 15 per cent, nine more than 20 per cent, three more than 30 per cent and one more than 40 per cent. As a result of area testing none of these worst areas showed, at last testing, more than 2.21 per cent, and ten were under .5 per cent, with one as low as .08 per cent.

Self-Feeding Hogs

A GREAT deal of self-feeding of hogs now takes place throughout the country. The saving of labor is very considerable, which is the great attraction of this practice.

The fact that so much labor is eliminated, however, can easily lead to carelessness and neglect. It is just as necessary with self-feeding as with hand-feeding, to watch the development of the pigs, and to change the mixture fed them, in keeping with their development and condition. Feed mixtures used for hand-feeding are commercial pig-starters and finishers, or the operators mix their own mixes from home-grown grains, along with protein and mineral supplements. The Department of Agriculture at Ottawa recommends that when such mixtures are self-fed, it is advisable to include more of the bulky feeds, such as oats, alfalfa meal or bran. The

pig will still be able to satisfy his appetite, despite the increased bulk in the ration, but will consume less of the fattening feeds.

It is further argued that self-feeding market hogs is suitable, not only for both winter and summer, but for indoors or outdoors, and for dry lot, or pasture. When practiced, however, care must be taken to see that an adequate supply of fresh water, preferably running water, or that supplied by a self-watering device, is regularly available.

Sheep Revival

CANADA'S sheep population, in common with the numbers of sheep in some other countries, has recently reached a new low. At the same time, the price of wool has remained very high, and may even go higher. The Canada Department of Agriculture finds that some livestock producers are turning to sheep again, because they require less labor than some other types of livestock.

The purchase of ewes from stockyards is not recommended for the replenishment of breeding stock. J. W. Graham, Production Service, Ottawa, suggests that this involves too many risks, and that the safest source of supply is the flock of a nearby breeder, from which well-developed ewe lambs may be selected. These, he says, may be safely bred if held for late breeding, and can be brought up to excellent condition by extra feeding.

Mr. Graham recommends that ewes of "Down" or Black Face breeding, such as the Suffolk, Shropshire, Hampshire or Oxford, should be bred to a white-faced ram like a Cheviot, or the other way around, since cross-breeding "will result in a better progeny than might be obtained by grading up." He refers to U.S. experimental work which indicates that open-faced sheep do better than full-woolled-face sheep, in number and quality of lambs.

Check Animal Disease

DEFICIENCY diseases of livestock are more likely to occur during the winter months when many animals are not as well fed, and are likely to suffer from mineral and vitamin deficiencies. It is a good idea, according to the Saskatchewan Department of Agriculture, to check up the rations you are feeding with your agricultural representative.

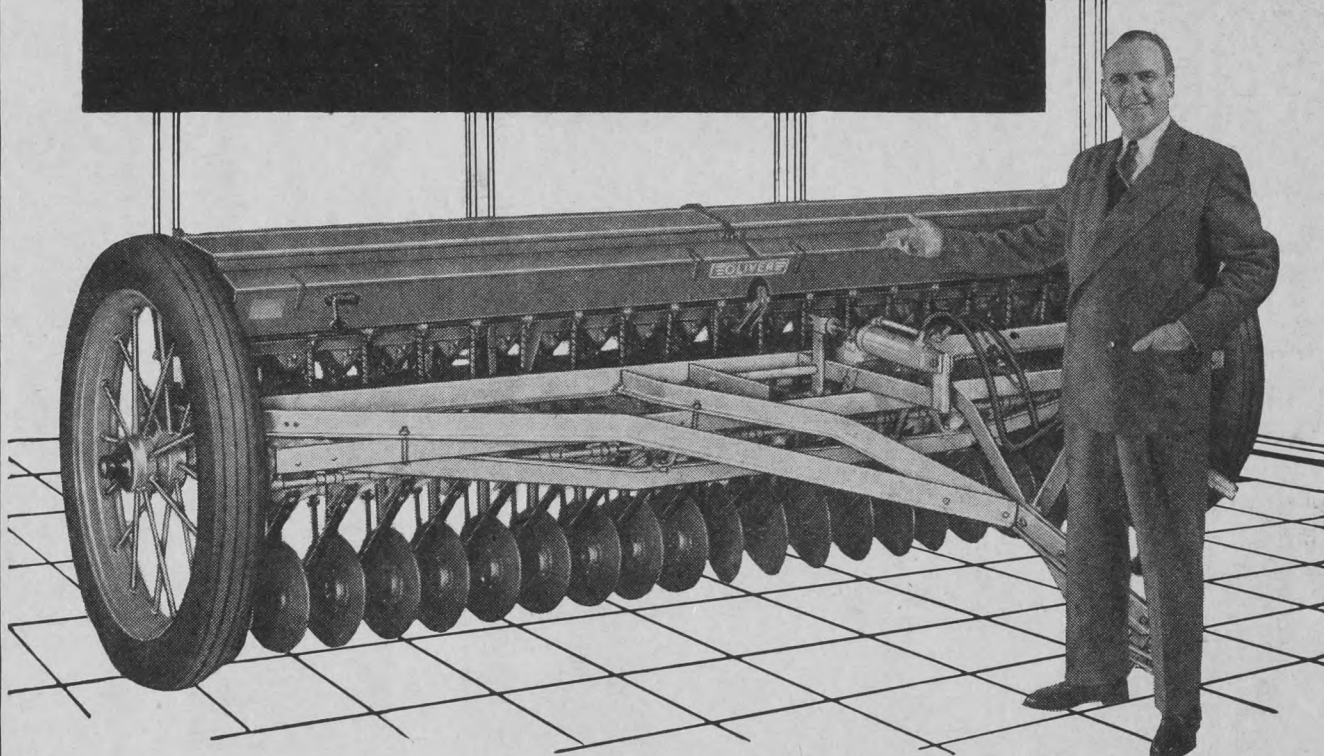
It is also calculated that very heavy losses are sustained by livestock owners from diseases against which their livestock could be immunized. Brucellosis or Bang's disease or contagious abortion, is costing farmers in western Canada a great deal of money each year. All calves can be immunized with a special vaccine for the purpose, and this serious disease reduced to a minimum in a comparatively few years. Other diseases such as black leg and hemorrhagic septicemia are also to be found in many herds, because the herd owners fail to have their animals immunized. There is no known immunization against mastitis, but the use of strip cups daily and prompt treatment will reduce to a minimum the heavy losses from this disease.

Young pigs can be immunized with a mixed infection bacterin to prevent hemorrhagic septicemia and enteric infection. Young pigs can be immunized also against swine erysipelas by the use of an anti-erysipelas serum.

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FIELD



Spring comes to Arkansas, where this 70-year-old couple put in their small crop. [Hadley photo]

New Legume for Alberta?

An interesting and hopeful experience with Birdsfoot trefoil

by R. B. JACKSON

A LEGUME which promises to fill a long-felt want is being tried out experimentally by the writer in the Winfield District of Alberta. It has the feed value and palatability of alfalfa, which it closely resembles in appearance and handling qualities. Unlike alfalfa, however, it does not cause bloat and it will thrive and live a long time on soils which will not, for one reason or another, maintain good or lasting stands of alfalfa.

Broadleaf Birdsfoot trefoil grows about two feet tall, with from 200 to 300 stems from one crown. It has a tap-like root, which will, if necessary, go down three feet or more to reach moisture. The stems are slender, branching and moderately leafy, and they remain green after the plant has matured seed, and until the snow finally buries the stand.

In total yield of hay or pasture on an acre basis, when grown with suitable grasses and well established, it compares favorably with any other legume-grass mixture. However, because trefoil will flourish on soils which will not maintain good stands of alfalfa or red clover, comparisons with these legumes are difficult.

The many bright yellow flowers are very attractive to honey bees, and it is therefore a reliable seed setter. When once established, trefoil will reseed itself year after year even when grazed. This ability, together with the fact that the plant itself is a long-lived perennial, explains the very long life of trefoil pastures.

The seeds are grown in small pods which shatter easily when ripe. The seed crop does not mature evenly, in that a single plant may bear blossoms, green pods and ripened pods at the same time. This is fine for the production of hay or pasture as the field is constantly reseeding itself, but it makes for light seed harvests; on the other hand, the threshed leaves and stems make top-quality feed because the plant is still fine-stemmed and green when the crop is cut for seed.

Like all long-lived perennials with very small seeds, trefoil is a slow starter and does not reach maximum production until the second or even the third year. Its place, therefore, is in fields intended for permanent hay

or pasture. During the seeding year the plants are small and weak and they will not compete well with weeds, or a so-called "nurse crop" of grain. However, once safely through its first winter, it is well able to look after itself.

The seed bed must be fine and very firm. If a man's footprint sinks deeper than the thickness of the sole leather—the seed bed is too loose. The seed should be just barely "scratched" in, about one-quarter inch deep.

As there are several trefoils it is important to use the right type and variety, because the others such as Big trefoil and Narrow Leaf trefoil are unlikely to prove suitable under our soil and climatic conditions. The adopted variety is Broadleaf Birdsfoot trefoil, the botanical name is *Lotus corniculatus*, and the best strain is known as Empire Lotus.

Trefoil requires a special type of inoculant. The culture does not exist naturally in Canadian soils, nor will cultures for any other legumes inoculate trefoil. Inoculation of the seed is very important.

Seed costs of the adapted variety are high and are likely to remain so because of increasing demand in the United States and difficulties of harvesting.

Because of its fine stems, trefoil will lodge if grown alone. Therefore it is better to use it in a mixture with grasses, unless, of course, seed production is the aim.

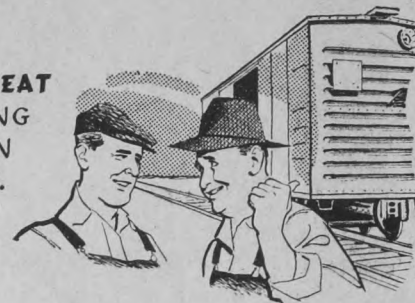
P.F.R.A. Brings Stability

IN 1937 a total of 500,000 tons of feed were shipped into the drought area of the prairies, according to Dr. L. B. Thomson, director of the Prairie Farm Rehabilitation Act, speaking before the third annual Farm and Home Week at the University of Manitoba. In spite of this large movement of feed, shortages forced about 480,000 head of livestock to market at low prices, and the whole western livestock economy was upset.

Recently it was as dry in this area as it was in 1937, but it was not necessary to move feed in, or livestock out. In the interval, water conservation projects had been implemented, especially in southwestern Saskatche-

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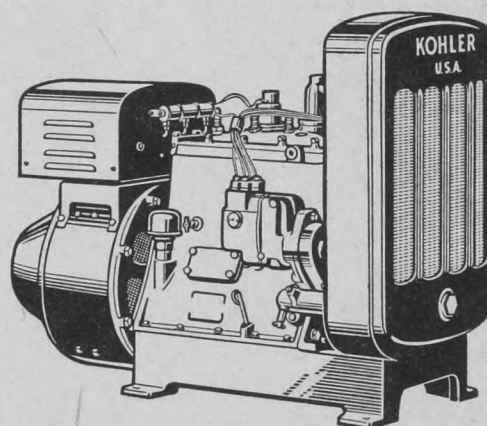
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wan and southeastern Alberta. Since the passage of Prairie Farm Rehabilitation Act, help has been extended for the development of 45,000 water conservation projects in the three western provinces. Of these 30,000 are in Saskatchewan, 8,000 to 9,000 are in Manitoba (largely dugouts), and the remainder in Alberta. During the same interval 4,000 people have been moved out of the drought areas; and regrassing has provided 1,350,000 acres of community pasture in Saskatchewan, and 300,000 to 400,000 acres in Manitoba.

It is felt that a longer-term plan is necessary, and toward this end the water resources of the Rocky Mountains are being studied, with the objective of using water that is readily available. Already the St. Mary River project has been completed. In 1949 the federal government took over the Bow River project and it is being developed. There has been considerable discussion and research on the practicability of developing a project on the Saskatchewan River near Elbow, and, though a comprehensive report has been tabled, no decision has yet been reached on whether or not to proceed. A project on the Red Deer River is also being studied. Dr. Thomson estimated that if all of these projects should be approved and completed, the total cost to the federal treasury would be in the neighborhood of \$200,000,000.

Studies are currently being made in the Carrot River Triangle in northern Manitoba and Saskatchewan, west of The Pas. Topographical features are being surveyed, and within the next year or two some information will be available.

P.F.R.A. activities were originally restricted to a definite area in the prairie provinces. More recently operations have been extended to include special projects in British Columbia; a project near the Duck Mountains in the Dauphin area of Manitoba; and some exploratory diking work west of Brandon, near the Assiniboine River. The requirements of conservation are somewhat different in these areas than in the dry sections of the provinces. In many parts of Manitoba there is more rain, a different soil and less wind. Water erosion is more of a problem than is wind erosion.

Dr. Thomson concluded with the remark that very close co-operation between the agriculturist and the engineer is an essential in contending with erosion problems.

Prairie Wool

PRAIRIE wool is the name commonly given to the native grass throughout the prairie area in western Canada. It is really a mixture of grass species, according to J. G. Campbell of the Experimental Station, Swift Current, Saskatchewan. This mixture varies from district to district, but wherever seen, it commonly shows a curled appearance of the mature grass, and the cured leaves have a high feeding value.

In the short grass prairie region, says Mr. Campbell, prairie wool is mostly a mixture of blue grama grass, common spear grass, and small amounts of blue joint, junegrass and other drought-tolerant species. In the mixed-grass prairie type there will be more spear grass and blue joint and less blue grama grass. There may also

be small quantities of rough fescue. Toward the outer edges of the grassland region there will be more rough fescue and oat grasses.

After curing, the leaves of prairie wool are retained on the plant and show considerable curl, twining with each other, not unlike an open-wool fleece in appearance. The quality is of greater importance. All of the species concerned cure on the stem to some extent, this being the process which conditions the plant for the winter season and preserves the plant nutrients in a form most easily available to grazing livestock. Thus, livestock can maintain themselves in condition, and continue growing when feeding on forage, after the plants have stopped growing. This nutritious character of prairie wool means that a relatively cheap supply of pasturage is available during the autumn and early winter months; and in addition, livestock owners are able to build up reserves of pasture without any labor costs, which are suitable to all classes of livestock.

Cereal Hay Crops

IN many of the drier areas it is extremely difficult to get any sort of stand of forage crop. At the same time it is often possible to get large yields of feed by cutting cereal crops when they are still in the green stage. Crops such as oats, barley, spring rye, fall rye and corn can play a most important part in supplying the feed necessary for the maintenance of a herd of livestock, and they do provide a fairly reliable source of feed.

The Dominion Range Experimental Station, Manyberries, Alberta, advises farmers to seed cereal grains reasonably early, if good yields are desired. The time of cutting will depend on whether quality or quantity is desired in the feed. The decision as to which is to be sought will depend on the age and type of stock which will utilize the feed. If the crops are cut soon after heading, the protein content is at its highest, but the yield is lower than if it were left until it was in the late dough stage. If the feed is to be given to growing animals, it is probably well to cut it when the protein level is at its highest, but if to be fed to mature animals, cutting in the dough stage is recommended.

It should be noted that smooth awn, or beardless type of barley should be grown if barley is to be cut as green feed, because the beards are quite as objectionable in the green stages as they are on the ripened barley head.

If the crop is light, harvesting can profitably be done with a swather and a pick-up baler. If it is heavy, it is probably better to cut it with a mower and a rake and then bale it, because if heavy crops are cut with a swather there is likely to be some molding in the swath.

Potatoes and Fertility

LAST fall I saw interesting results of the use of fertilizer, in a patch of potatoes up in the Carrot River country. It was a new experience for me, for on the familiar brown prairie soils of the southwest, the word fertilizer is seldom mentioned, and indeed, fertilizer is not generally recommended for many crops. At Moose Range, on the other hand, no intelligent farmer gets along without it, and it is used even on gardens.

It is interesting to study the differences in climate between the prairie, with its heat waves, sparse rainfall, and high evaporation, and the newer north, with its somewhat higher rainfall, lower evaporation, and milder temperatures. All these factors tremendously influence farming practices, as well as the soil which has been the result of these climatic factors.

While comparatively small amounts of fertilizer are used here for grain crops, larger amounts may be used if greater growth is desired, and for pastures and gardens especially, the larger amounts may be preferred.

The potato land I observed was once covered with willows, with several inches of mossy humus at the surface. After clearing, such soil may decrease rapidly in fertility, particularly if the humus layer is burned off in the process of clearing.

The eastern half of the plot had not received any artificial fertilizer. The western half had received a generous dressing of ammonium phosphate, 16-20. In the center of the area a small pile of manure had been scattered and plowed in. The area that had received neither form of fertility gave extremely poor results, and every addition of fertility reflected itself in strikingly greater yields. The soil was moist and mellow, and rainfall had been adequate or better throughout the summer. When the unfertilized part of such a patch yields poorly, the only conclusion is that the land in itself possesses little fertility, and that application of fertilizer in some form or other is extremely rewarding.

It would be difficult to account for the sudden increases in yields where fertility was added, on the basis of soil differences, for soil differences do not occur in regular fashion. The effects of the fertilizer were plain to see, and convincing. The most amazing difference was observed in the center of the plot where the manure had been plowed down. The man who planted this patch thought, at the time of planting, that the cover of manure was too great, and that the soil might dry out and consequently be less productive. It proved to be a groundless fear. The potatoes came out of the ground in a fashion to please the most ardent gardener. The special value of manure on northern soils was amply demonstrated.

The extra expense for the fertilizer and the labor of applying it were proved to be well worth while, both in total yield and in the noticeably larger size of the tubers harvested.—Leslie Jenkins.

Creeping Red Fescue

A CONSIDERABLE quantity of creeping red fescue is grown for seed in central Alberta, and in the Peace River area. The Experimental Station at Beaverlodge reports that the management of stands of this crop after two or three seed crops have been harvested, is constituting an important problem for growers. Old stands of brome can be rejuvenated by some drastic sod treatment, but no cultural method followed as yet by the Experimental Station has stimulated the heading of creeping red fescue.

Fertilizers were tried and the application of nitrogen just previous to freeze-up in the form of ammonium nitrate, or to a lesser extent, ammonium sulphate, was found to

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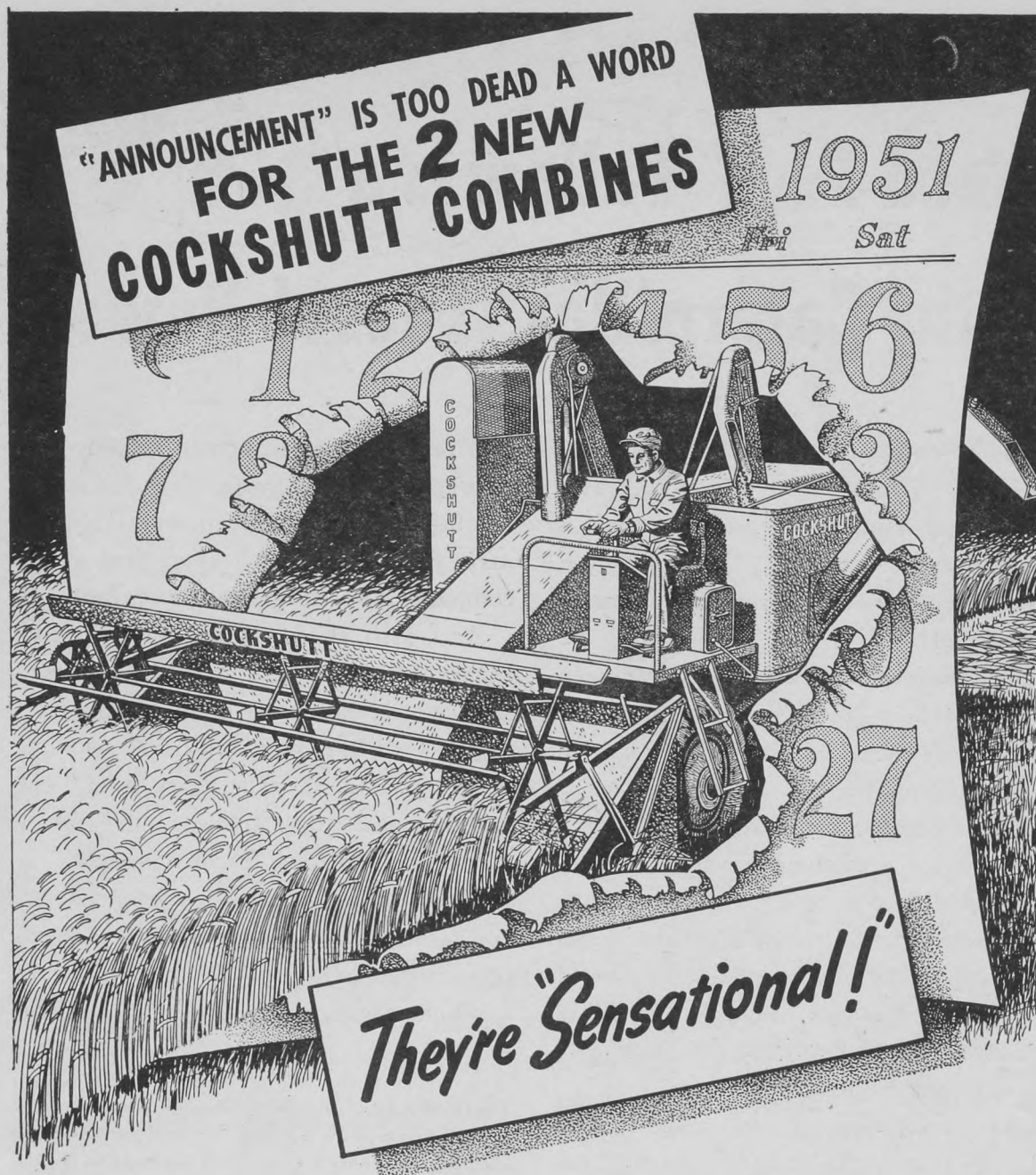


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stimulate head stalk formation the following year. Early spring applications were less effective. Applications of 100 pounds of fertilizer per acre were found, in experiments with four-year-old stands, to yield increases of over 100 pounds of clean seed per acre. Nevertheless the best rate of fertilizing will depend on the amount of available nitrogen already in the soil. The Station reports that fertilizer may be applied with the conventional drill, with fertilizer attachment, or by the use of a lime or fertilizer broadcaster. The latter implement has been found very efficient.

It has been more or less commonly held that stubble or other residue from the previous crop would be detrimental to head stalk production, and that some means of removing it should be found. The Station reports that this is not the case. Pasturing immediately following harvest will not harm the fescue plants, but ample new growth should be allowed to form before freeze-up. If this does not occur, the plant will go into the winter with depleted food reserves which may promote winter injury, or leave the plant in poor condition to produce flower buds the following spring. The removal of leaves after freeze-up will not harm the plant, except to deprive it of a means of holding snow during the winter.

Bringing Back Old Brome

AT the Experimental Station at Scott, Saskatchewan, an experiment was conducted to find out what methods would prove most effective in improving the yield of old stands of brome. Brome is grown very extensively for hay and seed production in the west-central and north-western parts of Saskatchewan. However, the creeping root stalks multiply so rapidly that the crop soon becomes root-bound and, after four to six years from seeding, both seed and hay yields are greatly reduced, according to H. A. Friesen, of the station.

Two fertilizers, ammonium phosphate (16-20-0) and ammonium sulphate (20-0-0) were used at rates of 50 and 100 pounds per acre, as well as well-rotted manure at 12 tons per acre. Combined with this fertilizer treatment, were two different tillage methods. One consisted of the one-way disk used at two inches in depth, and the mold board plow at a depth of four inches. The plowed sod was worked down and seeded to oats at one bushel per acre. All treatments were given in the early spring before the brome began to make active growth.

Over the past three years, neither the fertilizers nor the manure, without tillage, increased either the hay or the seed yield. Shallow, one-way disking alone, or in combination with the fertilizer, increased the average seed and hay yield by 30 per cent. Mold board plowing at four inches deep did not increase the yield of brome in the year the plowing was done, but it doubled both the hay and seed yield in each of the following two years. Moreover, the oat crop largely made up for the loss of brome crop in the year the plowing was done.

Mr. Friesen concludes that spring tillage, sufficiently rigorous to thoroughly break up the root system of the brome, seems to be the most efficient method of restoring old, root-bound fields.

Blizzard-Born Babies

The Horned Owl is a formidable hunter but as a weather prophet he makes some bad guesses

by JOHN PATRICK GILLESE

A BITTER February cold-snap enveloped the valley 100 miles north of Edmonton, which for years has been a favorite haunt of Great Horned Owls—"the evil genius of the woods," as P. Taverner, of the National Museum of Canada, calls this strongest, fiercest member of the owl family. Without warning, as I penetrated a clump of spruce, I was beset by one owl, which swooped from the trees toward me, pulling up over my face in an angry rush of wings, chilling air and savage beak-snapping.

February is the month that has given rise to accounts of horned owls attacking loggers and outdoorsmen—and I soon found the reason why. Well up on a barren balm, I spied the other owl huddled over a snow-covered, last year's hawk's nest, seemingly frozen stiff. Incredible as it seemed—for the weather was 22-below and winter was well entrenched for another six weeks at least—the motionless owl was not dead, but nesting. When I began scaling the rough tree, she glided off the nest into the dark woods and did not return, though her mate kept up his angry, beak-snapping attacks.

The difficulties surrounding owl birth are still baffling biologists, though research on both sides of the border is uncovering many of the answers, which are sought from more reasons than mere curiosity.

From two to five dull-white eggs, shaped like golf balls, are laid during the sub-zero cold of mid-February—when all other eggs would suffer 100 per cent mortality. The young owlets, white as the frozen snow around them, can be seen craning their necks over the side of the nest while March blizzards are howling. Seemingly the parents have no trouble either in hatching or raising their young.

NATURALISTS wondered how the parent owls were able to hatch eggs under such conditions. It is generally axiomatic that warmth is the first requisite for incubation, and any other bird, nesting even in the comparative warmth of mid-April, suffers a loss from "perishing," in those intervals when the mother leaves the nest for feed and exercise.

How long can an owl leave her eggs before they freeze? How long can the young be abandoned? What ritual of courtship is gone through? And since fresh meat will freeze solidly within minutes in February, how are the young birds fed? These were the chief questions to be answered.

Some of the findings are rather startling.

In 18-below-zero weather, a mother owl was kept off her eggs some five minutes, yet every egg hatched. In the same weather, ordinary chicken eggs, heated to hatching temperature, split wide open in the same time. The owls protect their eggs by a slight covering of minute, heat-retaining body down.

But as every resident of the North knows, frost penetrates as readily from below as from above. What, then, kept the underside of the eggs from freezing?

Examination of the rough-looking nests showed that the bottoms were, figuratively, an electric blanket of warm body down "that probably conducts, or absorbs, some of the mother's body heat." In addition, the rough stick bottom of the nest catches falling snow which ices from the heat and insulates the nest in exactly the same manner that a snow house keeps an Eskimo family warm.

The owl mother has an extra trick in reserve for really cold days and nights: with her strong talons, she lifts the eggs up "inside" her underfeathers, close to the body. A monstrous size in flight, the owl looks skinny when stripped of her feathered regalia, but this padding is extremely useful during the nesting season.

As for the baby owlets, even the parents' absence for 20 minutes while a blizzard howls, affects them not at all. So thick are their feathers, so perfectly fitted to their bodies, that their covering is more like a fur pelt than anything else.

THE parent owls are wise enough not to abandon either eggs or young for long, though. In the brooding weeks, the male sits on the eggs while the mother hunts a meal over the frozen flats. On exceptionally severe days, they may be seen covering the eggs together.

Conclusion reached by the National Museum of Canada is that the horned owl, even under such conditions, "is perfectly able to take care of itself," and even when hunted intensely, "is in no danger of extinction."

In fact the Museum adds the warning that, "in settled districts, it is to be guarded against in every possible way" (presumably even to destroying the nests), for of 110 stomachs examined, 31 contained poultry and game birds; eight, other birds; 13, mice; and 65, other mammals — a not-so-good verdict for the winged terror of the northwoods.

Forbush, a noted Massachusetts naturalist, comes up with even more damning exposés, gleaned after years of studying the horned owl, particularly at nesting time.

The owl's courtship is an elaborate affair, he says. "The male goes through peculiar contortions, nodding, bowing, flapping his wings," and numerous other comical antics, including swaying his head in dizzying circles. Courtship precedes nesting, and it is then the horned owl is at his worst.

According to this same naturalist, the father owl will "eat and kill many skunks"—a feat that few other denizens of the wild will even try to duplicate. Likewise, the owl kills domestic cats, woodchucks, weasels, mink, rabbits, etc. It carries off any size game bird, including Canada geese and mallard ducks, which "are skilfully picked off the water at night."

As for feeding their young, the owls pick the most digestible morsels—the brains. When food is plentiful, that is all the parents themselves will eat. The rest is thrown away.



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says MRS. WILLIAM F. HOSS

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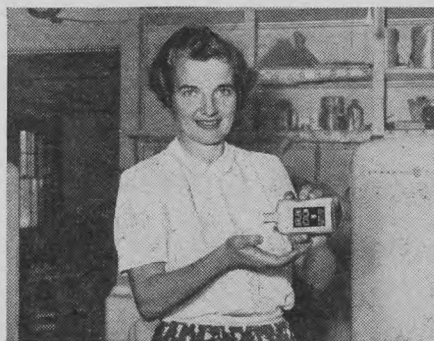
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Great Snakes

In which Vernon Hockley pleads for a great deal of latitude for those who tell snake yarns. You'll see what he means

WHILE clearing trash from under a flume, an Okanagan farmer was once bitten on the thumb by a rattlesnake. Somewhat impressed, he took time off to visit his doctor, who kept him in his office and fed him strong coffee at intervals all day. According to the farmer's own story, that was about all there was to it. But twenty years later I heard a local raconteur tell the story to a young immigrant couple fresh from England. His account checked with the farmer's except for one trivial variation, which was that the bitten man had died in agony. It went to show the license you can claim in telling a snake story.

The yarn I like best is the one of the native who was guiding a tenderfoot through a batch of basking rattlesnakes. "Won't hurt you," he said; "just watch out they don't bite you, that's all." Another is about the hill-billy who woke one night to find a rattlesnake coiled on the bed beside him. "Dang you critter, you," he said; "you had me scared for a minute. I thought you was the alarm clock." And for good measure, though you have read it before in *The Virginian*, the one about the woman who was so frightened by a snake that her next baby had eight rattles.

I once stepped on a coiled rattlesnake, but the grass underneath was soft and it didn't hurt him. He sped off in one direction while I leaped about 30 feet in the other, so that we parted without having learned much of each other. Still from then on I watched where I was stepping and I presume the snake watched where he was coiling.

IN a similar situation the redoubtable Ezra (Ace) Kercher of Summerland once looked down to find himself standing on the tail of a rattlesnake that was striking desperately at his leg. All that day, Mr. Kercher said, he was pulling up his trousers to examine the leg for possible damage. If he had seen the tiniest puncture, he declared, he would have dropped dead without waiting for the poison to take effect.

Most men, even those like Ace Kercher, who scares about as easily as a main-line locomotive, will admit some fear of a poisonous snake. The fear is seemingly instinctive and too strong to be worth denying. Past the first shock at sight of a snake, you can get down to earth and look at the thing reasonably, from behind a tree or something, but your first impulse is to jump. It takes a lot of familiarity to kill that impulse. I lived for a time in a part of Alberta where green-and-gold grass snakes literally swarmed. They were harmless snakes, but they were snakes, and there were thousands of them, and I grew perhaps as accustomed to the sight of snakes as anybody could have grown. Yet I still jump slightly at sight of a snake.

I hold the conceit of having once charmed a snake, Indian style, though the experiment was accidental. I was standing still beside a patch of grass

and whistling, off-key, an old popular tune called *Rose Room*, when a small snake crossing the grass suddenly stopped, wavered a bit and faced me. After a moment and a few more bars of *Rose Room* he began slowly to advance and eventually came within inches, with his head raised over my shoe and his little forked tongue darting nervously. Something broke the spell and he whipped off. But there was no doubt that he had come knowingly in the face of a strong inclination to run away.

OPPORTUNITIES for further tests have not recurred except in the cases of a few rattlesnakes on whom neither *Rose Room* nor anything else had any effect. They simply kept going. A rattlesnake can on occasion be extremely alert, but often he is oblivious to bystanders who keep still, apparently whether they whistle at him or not.

You would not imagine that a snake could get much expression on his almost immobile face. Yet once while spraying pear trees I came upon a coiled bull snake who was staring at something with a look of the most complete amazement I have ever seen on anything's face, reptilian, animal or human. What he saw was for a moment a puzzle, until it occurred to me that it was the hose, a hundred feet of black spray hose sliding behind me through the grass. The snake quite obviously had taken it to be another snake, one the like of which for size and vigor neither he nor any other snake in his right mind could have supposed existed.

A note for prospective visitors: rattlesnakes in the Okanagan are always gentle and seldom grow very large. It is true that a great deal of talk has been made about the young ones occasionally seen swimming in Okanagan Lake. But the people who have seen them, town-dwellers and the like, have no idea of the comparative sizes of snakes anyway. As a matter of fact they don't even know a rattlesnake when they see one. They call these things *ogopogoes*.

Bees by the Billion

Continued from page 13

the surplus profits from the business have been plowed back into it, and the establishment has grown steadily despite the pitfalls which lay in wait for all honey producers.

THE five years of Maunsell-Wybrants' war service made an unfortunate break for him, for with wartime sugar shortages, honey prices were high. Those were the bee man's fat years which he missed. However, prices stayed reasonably good until 1948. Then came the deluge! Apiaries all over the country, large and small, shut up shop. But this owner figures that he can produce for less than most of his contemporaries, mainly because of the scale of his operations. Mr. Burdge confides that one Alberta

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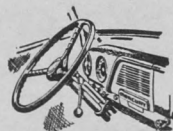
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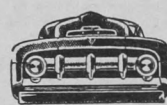
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operator lost \$5,000 in one summer in which the Macleod outfit showed a profit.

One circumstance favored the sailor on his return. The countryside around Macleod is one of the windiest in Canada. It has suffered from soil drifting at times. The Alberta Department of Agriculture has successfully pushed the idea of growing sweet clover as one of the aids against wind erosion. When Maunsell-Wybrants laid aside his sea togs thousands of acres of the best bee food in the world lay waiting to be gathered gratis.

The honey producers prospered with the sweet clover. Then came the weevil. Sweet clover stands all over the south were decimated. Honey yields went down. Maunsell-Wybrants' reaction was to move his apiary northward piecemeal. By 1950 most of his holdings were distributed over 70 farms radiating out from Clyde, 40 miles north of Edmonton. In this location willow and dandelion get the bees off to a better start. Red clover and alsike maintain the honey flow even if the sweet clover suffers insect damage. Higher humidity promotes a more even flow of nectar.

FARMERS in the south are not particular about housing bee colonies on their farms. Those in the north look on the business with a friendlier eye. Many of them are producing seed and are well aware that the presence of bees raises the yield. Indeed some contracts between bee owners and seed growers include an added payment to the former for an increase in seed yield over a given minimum.

It is rather peculiar that Alberta's biggest bee enterprise should have been born where the wind roars out of the Crow's Nest Pass, for high wind puts a brake on the winged workers. Mr. Burdge showed us bees at work in a breeze of 30 miles an hour. Its velocity kept them low on the ground where they got some protection from tall weeds and buck brush. He declares that bees can work as long as he can ride a bicycle into the wind.

His successor says in defence of the south country that July and August, the important honey gathering months, are the stillest in the year, and that the wind handicap is not as great as might be expected. Certainly no district could have produced a more prolific honey flow than Macleod in 1938 and '39, for in the former he got an average of 250 pounds per hive, a phenomenal year. Nevertheless, it is doubtful whether this peregrinating bee man will ever keep any substantial portion of his holdings in the south again.

Wintering bees in this land of the Chinook presents some problems of its own. Oldtimers tell the tale of the farmer who lashed his horses all the way home with the front end of the sleigh on snow and the rear bobs continuously on bare ground because the snow melted so rapidly. The story has some application to beekeeping. Warm spells tempt the bees to make flights from which, of course, they come back empty handed. At times when the mercury drops quickly they cannot all get back, and the colony is thereby weakened. It takes from 40 to 50 pounds of stores to carry a hive through the winter.

Early in his career this apiarist decided that it was cheaper and more satisfactory to gas his bees in the fall and to start again with package bees in the spring. In view of the extent of his spring purchases he established close relations with suppliers in Gridley, California, whose whole output he is now taking.

The practical Maunsell-Wybrants soon discovered that it was cheaper to haul package bees by road from California than to pay rail charges. The one catch is that the American government will not permit stop-overs for trucks carrying bees out of the country. It must be a through trip. Accordingly, this operator designed a truck body which will hold 1,000 four-pound packages of bees, and has a separate compartment behind the driver's seat where the alternate driver may sleep. Each trip takes about a week to complete. Last year he had three of these trucks on the road and made 15 trips. Besides bringing in his own bees he does a cartage job for the Alberta Honey Producers Association whose members find it the cheapest way of getting their package bees up from the south.

In the spring of 1949 he improved this performance somewhat by taking his own men to California to do the packaging. It provided further economies till Uncle Sam's department of labor put a stop to it.

Mechanically minded people cannot fail to express admiration for the ingenuity and economy which Mr. Maunsell-Wybrants has shown in the design and organization of his sterilizing and packaging plant at Macleod. This has nothing to do with purifying the product. The bees learned all about that before the dawn of recorded history. It has to do with removing the excess moisture from the honey to improve its keeping quality.

The plant is housed in buildings which were formerly part of the local wartime R.C.A.F. flying school. An old steam threshing engine was purchased to provide the hot water and steam required in the process. The arrangement of the machinery, storage space and delivery outlets indicates that its owner has more than a nodding acquaintance with Henry Ford's science.

PERHAPS nobody is more proud of Ernest Maunsell-Wybrants' success in this specialized business than Sydney Burdge, his old teacher. Now on the sunset slope, Mr. Burdge has been an apian devotee all his life under the most divergent surroundings. He learned the art in his native Somersetshire, country of balmy breezes and lush verdure. He practiced it in Jamaica where tropical handicaps outweigh the never-ending profusion of bloom. He made his debut on the Canadian scene as a rancher at Berry Creek in the dry years, when we suspect there were no berries, and probably no creek, and where the bees doubtless had to depend on the family wash hanging on the line to get enough moisture to survive. Beekeepers, like preachers, rejoice when they acquire a new convert to propagate the ideas which possess them. What a preacher! And what a convert!



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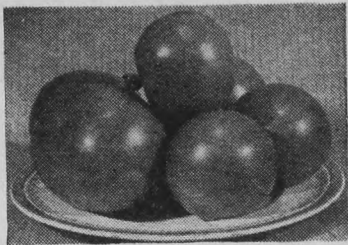
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HORTICULTURE



The Crosses grew this fruit in 1950 plus some Heyer No. 12 and Silvia.

One of the Best I've Seen

A small, well-cared-for orchard at Kipling, Sask.

by D. R. ROBINSON

LAST July I had the pleasure of visiting with Mr. and Mrs. C. C. Cross, who farm near Kipling, in southeastern Saskatchewan. Their orchard contains 48 fruit trees and from the standpoint of variety, maintenance and shelter it is one of the best that I have seen in several years. Adequate shelter is provided by a four-row shelterbelt which was planted about 27 years ago. This belt is made up as follows: an inner and an outer row of untrimmed caragana, and between these one row of Manitoba maples and one row of ash.

With the exception of a few trees this orchard was planted in 1945. It contains 11 varieties of plums, seven varieties of crabapples, five varieties of apples and three of cherry hybrids. There are also a few gooseberry plants and some Chief raspberries. In view of the fact that the winter of 1949-50 had been a rather severe one I was glad of the opportunity to check these varieties for winter injury. In many instances it is difficult to identify varieties with certainty because of lost labels or names being obliterated. All too often the intending fruit grower neglects to make a written plan of his orchard when it is planted out. In this case, however, there was a carefully prepared plan and with the exception of one tree there was no problem of identification.

Both Mr. and Mrs. Cross are keenly interested in fruit growing and we had a most enjoyable time discussing the merits of the different varieties. Furthermore, their 16-year-old son, Lane, accompanied us as we inspected the orchard and he was just as keenly interested as were his parents.

It would take some time to describe all the fruits in this orchard but here are some of the highlights. The Bounty and the Dandy plum trees were seven feet in height, carried good crops of fruit and showed no winter injury. These two varieties are preferred by Mr. and Mrs. Cross. Other plums showing vigor and hardiness were Mina, McRobert, Olson and Dropmore Blue. (The last mentioned variety is probably too late in ripening for most districts.) Mammoth, Mandarin and Cree showed some evidence of winter injury.

Of the seven varieties of crabapples, Osman and Florence are preferred. These two along with Bedford, Adam

and Silvia were fruiting heavily and showed no indication of winter injury. The Adam crabapple seems to be a vigorous grower; one tree was nine feet in height. Both Dolgo and Columbia appeared to be free of damaged wood. These two varieties were not producing heavily, possibly because of frosts at blossoming time. The Heyer 12 apple, some seven feet in height, carried a heavy crop of fruit and showed no sign of winter killing. Blushed Calville and Rosilda had killed back severely. The Battleford and Reward apples showed some winter injury, but were less severely damaged than Blushed Calville and Rosilda. Reward, planted in 1945, has not fruited yet. The plum x cherry hybrids were represented by Opata, Dura and Tom Thumb. These produced a fair amount of fruit in 1950.

THE following quotations from a letter from the Crosses are of interest: "In addition to the orchard we have quite a large family garden. This can all be kept in good condition by one hour's work a week. We usually bring an implement at noon on Saturday and cultivate the garden right after dinner. The spring-tooth harrow is used chiefly because it will brush past the fruit trees without cutting off the branches. A border is kept cultivated around the garden and orchard. This helps to control the weeds and grass. We also mow around the fences two or three times each summer to prevent the weeds going to seed. It is not difficult to take care of the garden and orchard when the work is done with power equipment. We feel that this small enterprise is well worth while and we think that more people should try to grow some fruit."

These comments suggest that the maintenance of a small home orchard need not be too arduous a task.

(NOTE: Mr. Robinson is extension horticulturist at the University of Saskatchewan.—Ed.)

Egg-Size Strawberries

FRIENDS across the border sometimes send me clippings from their newspapers—a hint, I suppose, that I should keep up with the times. Recently I read of some grower down Kansas-way, who claimed that he produced strawberries as large as hen

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eggs and hoped to have them as large as apples. Another told of berry growers in California co-operating with a California institute near Modesto, where ten million new seedling plants are produced annually from 16 predominant types known to the trade there as University types.

I would like to see them: nevertheless, a private breeder could not handle such a project.

The climate of the southern states is quite different from our prairie climate. Here we have to have plants hardy both for cold and heat. This combination is very difficult to secure, and I have only one that has this quality. It has heavy roots, the main ones being very strong and growing very deep. Mostly the fruit is held up in the sun, but I have never seen it scald or cook in the heat. Most growers will have noticed berries that appear to have been boiled white with the heat, and I have seen Gem and Aroma show up very badly on a hot day. Varieties that have a heavy crop of leaves protect the fruit. Glen has plenty of leaf but the fruit is mostly carried in the open and does not burn. Do not ask me why. One of its parents burns badly.

I am not surprised at the egg-sized fruit. I had a good quality one but lost it when the wind blew the mulch off during the winter. I have never seen a berry of apple size, but think it can be done. When the first man produces one, we can use it on our hardy prairie stock.

When I started growing berries for market, I had only the old varieties, none of which could stand up to the hot summers, so I started making some that would. Now I am using varieties from the west coast on my own and Ottawa varieties. One is very disease resistant, and very useful in crossing, since its progeny shows up well. The foliage is very clean and healthy.

The Glen family includes Glen, Glenmore, Glenhart, Glenelm and Gleneve. These in turn are followed by other Glen varieties.

I must say it is a heartache at times. Promising seedlings sometimes fall down badly, and one I was not so sure of, after three years of trial, turned out to be one of the best. Some varieties do better in some places than others, which is why I always advise planting two or three varieties to determine which one suits best under a special set of conditions. A good pair of everbearers are Glensis and Gem, the former being ten days ahead of Gem in both crops. If the fall is late it will give good picking very late in the season.

I had the pleasure of seeing how and what strawberries they had out on the west coast this season, and I must say, berries there do not have the sweetness and zest that the ones grown here possess. The coast berries we get here are a special pack, and our growers should put up an attractive culled basket with faced berries instead of the rough and tumble lot we generally see. Some varieties will make a very attractive basket, but others such as Dunlap, which is a long berry, would not look as neat. Aroma soon fades and looks old.

I believe the June bearing varieties are more suitable for commercial production. You get a good crop over a comparatively short season and it is over with. Nevertheless, everbearers come in very handy as off-season

fruit of dessert quality. They therefore should be the sweetest varieties procurable. If we can produce quality berries in the everbearing class like the California giants just mentioned, why grow apples?—Manitoba reader.

Hardy Currant Varieties

LIKE other fruits, currant varieties, especially the varieties of red currants, are variable in hardiness. For the farm or home garden, hardiness and quality are perhaps the two most important considerations. Yield is always important and good size of fruit makes for easier picking. Success, according to the Experimental Station at Beaverlodge, in the Peace River district, is dependent on spraying for the currant fruit fly, and on systematic annual pruning.

Varieties recommended from Beaverlodge are: Black—Climax, Eclipse and Magnus, all of which are hardy, vigorous and productive of medium to large berries, and in addition are of good quality; White—White Grape and White Imperial are both hardy, vigorous, productive and of good quality fruit, the White Imperial being larger in size; Red—Victoria (very hardy, vigorous and productive), Red Cross (hardest of the large, red-fruited varieties, with rather weak canes but productive and vigorous), and Prince Albert (hardy, with medium-sized fruit). The last-named variety is apparently resistant to currant aphid damage.

Know Your Shrubs

by DR. R. J. HILTON,
University of Alberta

Peking Cotoneaster

THE Peking Cotoneaster (*Cotoneaster acutifolia*) is the commonest species of hardy Cotoneaster, (pronounced koh-toh-ne-as-ter), a group of plants belonging to the Rose family. The name means "sharp-leaved plant similar to the quince," and the Peking Cotoneaster (*Cotoneaster acutifolia*) does resemble the less-hardy Japanese Quince in plant habit and appearance.

A fairly dense shrub, moderately spreading in habit, the Peking Cotoneaster is a foremost prairie favorite for attractive hedges and for lawn specimens or for group plantings. With shiny green foliage that turns glowing red in autumn, the neat plant habit, attractive leaf color and masses of purplish black berries more than offset the inconspicuous nature of the small pink-and-white flowers. The fruits persist on the shrub, providing winter food for birds.

Cotoneaster hedges are fairly expensive, due to the difficulty of propagating plants from cuttings, and the long period required for seed germination. The plants, however, respond to hedge clipping very well; in addition, they make attractive individual specimens, reaching a diameter of eight feet and a height to six feet. Generally, branches older than four or five years become weak and unattractive. Thus an annual light pruning should be practiced, to reduce the number of old branches and encourage a few strong young branches. This shrub is tolerant of partial shade if planted in good garden soil, but requires a sunny location if the soil is light and rather poor.

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Poorly designed feed hoppers can be responsible for loss of feed; so can overfilled hoppers. If they are overfilled the birds will spill feed when they are eating. If they are filled twice a day it will not be necessary to fill them so full and losses will be reduced. This has the added advantage that the provision of fresh feed twice a day stimulates consumption and leads to higher egg production.

Two rats in the poultry house will eat as much feed as one hen. Rats and mice can be responsible for serious feed losses.

Saving feed does not mean cutting down on the amount fed; the reverse is usually the case. High feed consumption is necessary if egg production is to be maintained. Feed intake can often be stimulated by feeding supplementary pellets, or a wet mash at midday. If 20 feet of hopper space is provided for each 100 birds they will feed without crowding.

The supply of water should be carefully watched. If there is not an adequate supply of good, clean water some of the benefit of careful feeding will be lost.

Efficient use of feed presupposes strict culling. At 70 per cent production about six pounds of feed are required per dozen eggs; at 40 per cent production it takes nine pounds. The producer who uses plenty of good feed without allowing any to be wasted, who provides clean water and who culls constantly is well on the road to efficient egg production.

Poultry Parasites

PARASITES on birds draw their blood, which must be replaced. They also spread disease. For these reasons it is most important to keep birds free from mites and lice, advises F. J. Higginson, acting poultry commissioner, Alberta Department of Agriculture.

Lice stay on the birds, and can be identified by separating the feathers and looking at the skin. They can be killed by painting the roosts with nicotine sulphate, or any good roost paint, just before the birds go to roost at night. If the procedure is repeated in ten days the lice that have hatched

since the previous treatment will be killed. It is important that all birds go on the roosts on the night of the applications.

Mites spend their days in cracks in the henhouse, and usually come out to feed at night. Careful examination of cracks near the ends of roosts will reveal their presence. They can be cleaned out in one treatment by spraying all cracks and crevices with a mixture of three parts kerosene and one part crude carbolic.

Provide Fresh Air

THE average poultry house is closed up too much, especially when the weather is not bitterly cold, in the opinion of the North Dakota Agricultural College.

Moist air is trapped if the house is tightly closed, and dampness will result. Even in cold weather, windows in small, uninsulated houses should be opened slightly, and in mild weather they should be wide. The object is to permit movement of air.

If a poultry house is insulated it tends to improve ventilation. When the ceiling and side walls are insulated, a temperature difference develops between the inside and outside of the house. Higher temperatures of moving air inside the house increase its moisture carrying capacity.

A properly installed exhaust fan will improve ventilation. The fan should move two cubic feet of air per bird per minute for the light breeds and two-and-two-thirds for the heavier breeds.

Feeding for Hatchability

POULTRYMEN have long recognized that the diet fed to breeding flocks of chickens and turkeys has a bearing on the hatchability of the eggs produced, and the livability of the chicks and poults.

Breeders often purchase a commercial breeder mash or hatching concentrate, rather than attempt to mix the ingredients at home. The ingredients known to be essential to good hatchability include calcium from oyster shell or limestone grit, Vitamin "A" found in good quality greenfeed and fish oil, Vitamin "B" found in milk products, greenfeeds and manufactured synthetically. Vitamin "D," found in fish oil, is also required.

It has been shown that Vitamin "A," in particular, is readily destroyed in mixed feeds. For this reason it is important that mixed feeds be fresh



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when fed. If there is danger that feeds may be over a month old it is wise to feed additional fish oil. This can be fed in warm, wet mash at the rate of four to six tablespoons per 100 birds, or it may be rubbed into whole grain at the rate of one pint per 100 pounds.

Most Popular Breed

THE popularity of different breeds of turkeys has been studied and reported upon by the United States Department of Agriculture. It has found that the Broad Breasted Bronze is still the outstandingly popular breed with the majority of turkey growers.

Of the more than two million breeding birds under the national turkey improvement plan in 1950, three out of four were of this breeding. If the second place Standard Bronze flocks are included the two groups account for nearly nine out of ten breeders. The relatively new Beltsville White variety is in third place, accounting for one out of 15 of the breeders under the improvement plan.

Feeding Frosted Grain

THOSE poultry producers who have frosted wheat on hand will be interested to know that experimental work designed to determine its feeding value is being carried on at the Experimental Farm, Brandon, Manitoba. At present no conclusive observations have been made, but the work is proceeding, and it is expected that shortly there will be something to report.

The tests involve the feeding of baby chicks as well as laying hens. The feed value of frosted wheat is being compared with that of normal, high quality wheat. The rations under test contain larger quantities of wheat than are normally used, in order to emphasize any abnormal effects that a frosted sample may have on the development of chicks, or on the performance of the laying flock.

Growth Stimulation

EARLY trials with soybean oil meal showed that it contained a good protein, but there was some vitamin-like substance that had to be present with the meal if good feeding results were to be obtained. The best source of this material appeared to be fish-meal and fish solubles, and it was found in lesser quantities in meat scrap and milk products. This unknown factor became known by the term "animal protein factor."

In 1948 a vitamin later known as Vitamin B12 was identified as being present in these materials.

In March, 1950, it was found that certain APF feed supplements contained an antibiotic. This antibiotic, called aureomycin, stimulated growth to a greater extent than Vitamin B12 alone. Since then a number of antibiotics — streptomycin, aureomycin, bacitracin, terramycin and penicillin—have been shown to stimulate the growth of chickens.

There is still a great deal of work to be done in the field of antibiotics and Vitamin B12 in poultry feeding. However, W. W. Cravens, poultry specialist, University of Wisconsin, reports that a ten per cent increase in growth might well be expected when you add antibiotics to poultry feed; and further, that recent experiments show that antibiotics bring out an even greater stimulus of growth in turkeys than in chickens.

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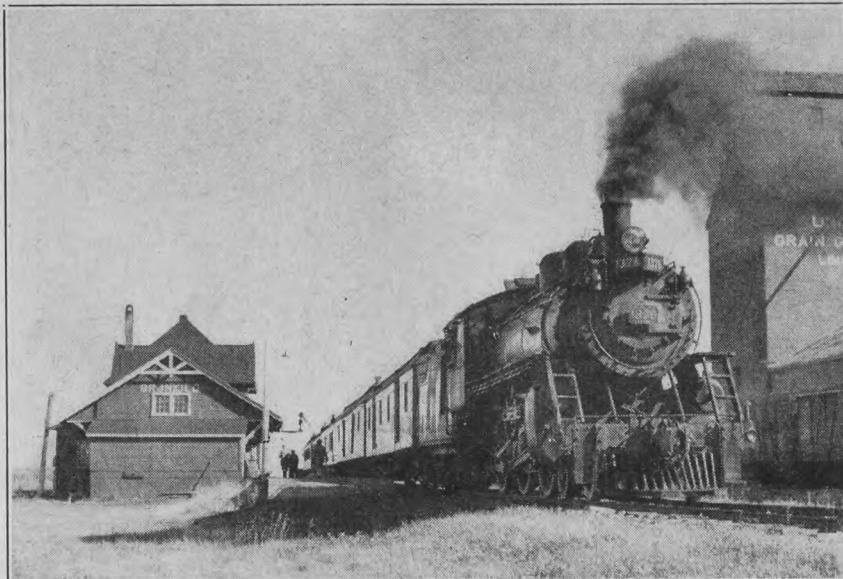
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FARM YOUNG PEOPLE



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Building Good Citizens

TWO of the young exhibitors at the recent Ottawa Winter Fair were comparatively recent arrivals in Canada. It is pointed out by the Canadian Council of Boys' and Girls' Club Work that this serves to illustrate the large contribution that clubs are able to make in integrating these younger so-called "new" Canadians into our way of life.

John Vreman arrived from Holland in May, 1949. He has since been employed by F. C. Eligh, prominent farmer at Finch, Ontario, and director of the Holstein-Friesian Association.

During the two years that he has been a member of the Newington Junior Calf Club, Vreman has distinguished himself. He won first prize with his calf in a class of 20 at the achievement day last fall, and the same award in the open class at the Newington Black and White Show. He was top in showmanship at the local club show; in competition with 56 other members he won the same distinction at the Ottawa championship show.

When general proficiency scores were compiled for Stormont County this same member had compiled 933 out of a possible 1,000 points to take first place, and to win an award and an all-expense trip to a one-week short course at the Ontario Agricultural College. He is a member of the local Tractor Maintenance club, and last fall he won third prize in a tractor class at the local plowing match.

His ambition is to some day own his own farm and a dairy herd. It would appear that his club experience has made the gaining of this objective much more likely.

The second exhibitor at the Ottawa Junior Show, Andrew Diepstraten, also came from Holland. He is one of eight boys and girls from Holland who were members of last year's Williamstown Calf Club in Glengarry County, Ontario. He came from Holland with his parents three years ago and has since worked on several farms, including that of Mac McRae, who is calf club leader in the area.

Andrew has been a calf club member each year, and in 1950 he exhibited the first prize calf at the Holstein calf club achievement day. He is now working for an Ayrshire breeder and next year will be gaining experience with that breed.

These successes are the more

remarkable when you consider that when these boys arrived in Canada they could not read or write the language, and had no knowledge of club work or other facets of Canadian life.

Junior Seed Fair

IN the light of the recent successes that have attended the efforts of junior seed exhibitors in the province of Alberta, no urging should be necessary to bring out many entries in an Alberta grain show. The Provincial Junior Seed Fair is to be held at the Exhibition Grounds, Calgary, on March 8, 9 and 10, and G. S. Black, supervisor of junior activities, advises exhibitors to have their samples ready.

Persons eligible to exhibit include all farm young people between the ages of 12 and 22. It is not necessary to be a member of a junior club. Special prizes are available for new exhibitors. There will be a number of other valuable prizes.

Quart-sized samples are required. It is an interesting and useful experience to prepare such a sample; and it has the added value that it teaches the exhibitor the finer points of choice grain. There is a special class for 25 bushels of malting barley, which gives members an opportunity of preparing seed in large quantities, and of competing for a handsome cash award.

Electricity Course

THE electrification of rural areas is making rapid strides in many parts of western Canada and the western United States, and a knowledge of the subject is becoming increasingly important. The Extension Service in North Dakota announces that they have successfully concluded their first year's program of 4-H Club training in rural electrification.

The new program includes a study of basic electricity and basic wiring, with practical experience in building and maintaining electrical equipment.

Each member is furnished with complete plans for building eight pieces of electrical equipment. This equipment includes such items as portable motors, extension cords, pig or lamb brooders, an electric drill press and stockwater equipment. Members may select the equipment that they wish to build from these plans or, with their club leader's approval, they may build any other piece of equipment they wish to select.

The Great Scout

Continued from page 8

advance party. When the red-coated riders reached the Milk River for the noonday halt they found their guide sitting near a fat buffalo cow which he had killed and dressed for the use of the troops. To those new to such life he appeared to know everything, and their good opinion of him was confirmed when, on the second day, he turned sharply to the left toward the Milk River ridge, selected a camping ground, and led the party a short distance to some fine springs containing the best water they had tasted for many a long day.

JERRY POTTS' most colorful adventures date from this time. After erecting permanent quarters at Fort Macleod, the assistant commissioner proceeded to patrol the district and acquaint himself with the various trading posts set up by the whisky traders. By the end of October he was able to report to Colonel French: "I am happy to inform you that although we have all been very busy in the construction of our winter quarters, we have been able to carry on some police duty as well and have struck a first blow at the liquor traffic in this country."

The blow referred to was the capture and arrest of a colored man named Bond and three other Americans who had a trading post at a place called Pine Coulee, about 50 miles from Macleod. Information as to this man's activities had reached the police through an Indian named Three Bulls, who had bartered two horses for two gallons of whisky. To avoid rousing suspicion in the traders' minds, Colonel Macleod made arrangements for Jerry Potts to meet Three Bulls at a certain place and obtain more exact particulars. Superintendent Crozier, with ten mounted men, was to be ready to move out of camp when the moment for action came.

The plan was carried out without a hitch. Guided by Potts, the police rode down upon Bond and his associates after a forty-mile chase and arrested the entire party. They also captured two wagons, each of which contained cases of alcohol, some rifles, revolvers, and buffalo robes. Bond's white companions were fined and he himself was sentenced to a term of imprisonment.

Nor was it always easy going with the Indians, as the following incident will clearly reveal. Two members of Chief Red Crow's band of Blood Indians were wanted on a serious charge of cattle-killing. Both men were known to be in the Indian camp near Fort Stand Off, and a sergeant and a youthful constable were sent out to arrest them. Having secured their prisoners, the policemen were about to lead them away when their howls brought a number of squaws and young braves to the spot. There was a scuffle, and the police found their captives forcibly wrested from them. In the excitement the young constable drew his revolver, and a serious riot would have ensued had not the sergeant immediately ordered his companion to replace his weapon.

Realizing that it was more discreet to retire, the two policemen returned to Fort Macleod to report to the commandant, Superintendent Sam Steele. That gallant officer approved of their

action, but he had no intention of allowing the Indians to defy him. He thereupon ordered Inspector Wood, Dr. S. M. Fraser, and a non-commissioned officer with twenty troopers to proceed at once to the camp and demand the surrender of the two men. As on so many other critical occasions, Jerry Potts went with them to act as interpreter.

THE little company marched out to within a mile or so of the camp, which lay on the other side of some low hills. Potts was then sent forward to make known that Superintendent Steele required the immediate presence of the two men previously arrested, as well as those who had aided in their release. In a short time Potts returned to announce that Red Crow was smoking his pipe and would think the matter over. The Chief also sent word that his young braves were very excited; a Sun Dance was being held, and they were getting out of hand. In a word, the Chief was resorting to the old Indian game of bluff.

Inspector Wood's reply was brief, and to the point: "Tell Red Crow that we must have the two men wanted and those who helped to rescue them, within one hour's time; and Red Crow must bring them in person. Otherwise we shall ride in and take them. In which case," he added, "Red Crow will have to abide by the consequences."

When this stern ultimatum was delivered by Potts to the Indians, there was a great uproar in the camp. The young men of the band were in fighting mood, and the situation was a critical one. The minutes slipped by, and the time limit fixed was almost reached without a sign from the red men. It was a tense moment for the police.

At last, the hour having expired, the Inspector gave the word to mount. The troopers were about to move, when suddenly a solitary Indian appeared on the brow of the hill. After him came another, then two more, and these were followed by others in small parties until quite a number were seen approaching. Among them was the Chief, Red Crow, himself.

ANOTHER remarkable adventure in which Potts took part occurred during the days of prospecting for precious metals in Montana. He had been hired as guide by Major George Steell, known to the Indians as "Sleeping Thunder" on account of the fiery spirit that lay beneath a calm exterior. They went prospecting, taking a young tenderfoot with them. After a long time the little party found nothing and were returning home when a band of about two hundred warriors on the warpath rode out from a coulee and gave chase at full speed.

The three white men rode for their lives for a short distance, whilst they consulted as to what course they would pursue, and finally decided that as the Indians would make the running and thus eventually get them, it would be best to turn suddenly, charge through the red men, firing right and left, and make their way, as fast as possible, to a deserted log cabin about two miles farther back. No sooner decided than acted upon. They dashed through the Indians, taking them by surprise, and reached the cabin in time to off-saddle and let the horses go.



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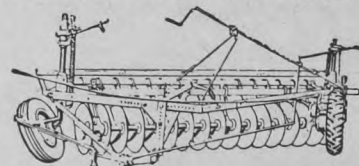
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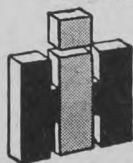
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The door was off its hinges, so they placed it on its side across the entrance, braced it with some logs left beside the fireplace by the former occupant, and stood rifle in hand and revolver ready for the assault which was sure to come. At a considerable distance from the cabin the Indians dismounted and rushed at them, receiving the fire of the defenders of the hut. Several were killed, but a number of attacks were made. Potts killed five Sioux with his revolver through the cracks of the hut.

The first assaults failing, the Indians drew off some distance and waited for darkness to come so that they could burn them out. But Potts knew a better trick than to wait. He took one of the saddle blankets, wrapped it round him in Indian fashion, crept out of the cabin when it grew dark, went round behind it on hands and knees, and walked a quarter of a mile back, keeping the cabin between him and the Sioux. He then strolled round to a point behind them, went amongst them as if he were one of themselves and, finding some of the horses loose, took three of them back the way he had come, brought them close behind the cabin where he and his comrades mounted and made off. As they galloped over the hill, Jerry could not resist a war whoop of defiance for the benefit of his outwitted pursuers.

In appearance, Jerry Potts was not an imposing figure. He was a short, bow-legged man with piercing black eyes and a long straight nose. Though troubled with a hacking cough, he was tough as nails, and was never known to shirk his duty.

"No one," said Sir Sam Steele, "attempted light conversation with him, although he was very good tempered. It was difficult to get from him an account of his very eventful life, but occasionally, when few were near, he might be drawn out. I have had many chats with men who had been in all sorts of adventures on the western plains from the Gulf of Mexico to their northern limit, but none were more interesting than our favorite, Jerry Potts. His influence with the Blackfoot tribes was such that his presence, on many occasions, prevented bloodshed. The Mounted Police and Indians knew his character for tact and pluck and believed that he would stay with his party to the last moment, no matter how serious the situation might be. In his dealings with the red men he was a master of finesse, a most important quality in all who deal with those keen children of Nature. It was a great pleasure to know Potts, for his conduct was always that of a gentleman, and he possessed most of the virtues and few of the faults of the races whose blood coursed through his veins."

"As an interpreter," wrote Steele in his book, 'Forty Years in Canada,' "he was the most reliable that we ever had, being truthful and clear. In explaining to the courts and the members of the force, he had a clear-cut but terse way of his own, one might

say, boiling it down to the finest point needed; and to the Indians the remarks of the white officials were explained so accurately that there could be no shadow of doubt in their minds."

Other writers have corroborated Steele's statement. Indians are often rambling in their speech in council, saying much that has no bearing on the question at issue. But all who knew Potts agree that he would get to the gist of the matter in a few sentences.

BUT it was as a guide that Jerry Potts showed an ability little short of genius. No matter how fierce the storm or how difficult the trail, he led straight and true to the point aimed at, and was never known to be at fault. His sense of locality and direction was almost uncanny.

"As scout and guide," wrote Sir Sam Steele, "I have never met his equal; he had none in either the Northwest or the States of the South. Many such men have been described in story, and their feats related round many a camp fire, but none whom I have known or of whom I have read equalled him. In the heat of summer or in the depth of winter, in rain, storm or shine, with him as guide one was certain that one would arrive safely at the destination. It did not matter whether he had been over or in that part of the country before; it was all the same to Potts, although he never looked at compass or map.

"Unlike other guides, he never talked with others when he was at work. He would ride on by himself, keeping his mind fixed on the mysterious business of finding his way. He was never able to give any clear explanation of his method. No doubt his gift was largely the result of heredity. He had travelled in his youth for long distances from points in western Canada to points in the western States before there were any railways, and his early experience certainly counted for much. Though he had not before journeyed through many parts of the country, his Indian ancestors had, and that is probably the true explanation of his weird ability."

There is little more to tell. In the summer of 1896, Jerry Potts, after having served the North-west Mounted Police Force faithfully for twenty-two years, died of an affection of the lungs. He was buried in the police plot at Macleod, and—more fortunate than many of his compeers—a monument was erected above his grave as a tribute to his loyalty and integrity during his years of service with the police. The simple inscription on his gravestone reads as follows:

"R.N.W.M.P.—In Memory of Interpreter Jerry Potts, D Division—Died July 14, 1896."

The author of the foregoing article, Rev. W. Everard Edmonds, is a retired Anglican clergyman of Edmonton. He is president of the Alberta Historical Society.



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*Optional on De Luxe models at extra cost.



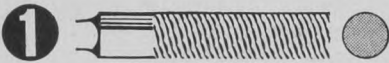
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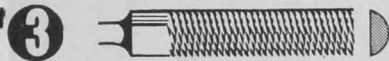
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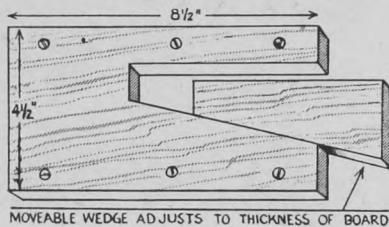
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Workshop in February

You can do many odd jobs this month in preparation for the busier seasons to come

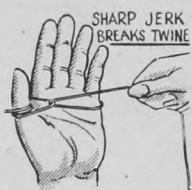
Adjustable Bench Stop

This bench stop is self-locking and self-adjusting. It is made from a piece of hardwood two inches thick, 8 1/2 inches long and 4 1/2 inches wide. The edge of the wedge parallel to the side



of the block is five inches long and one inch in from the edge. The base of the wedge is one inch across. The thick end of the wedge is 2 1/4 inches wide and the block fits snugly in the slot. The unit can be fastened to the top of the bench and used to hold edges, bevels and half-rounds as well as standard materials.—I.L.P.

Breaking Twine



A straight pull will not break twine without hurting one's hands. By turning the cord around the thumb several times and then dropping a loop over the rest of the fingers the cord is placed on the hand as shown. With a stiff jerk the cord will break at the point where it is bent through the loop.—B.R.

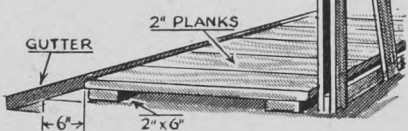
Rope Halter Release

Stockmen know that it is frequently more difficult to take a rope halter off a wild beast than it is to put it on. An easy way to overcome this is to tie a cord or light rope into the left cheek of the halter. To release the animal, drop the halter shank and pull the release cord. The halter will open right up and drop off.—A.M.M.



Calf Stall Floor

Here is a sketch of a clean, handy stall floor for young livestock. I use two-inch planks which are six inches shorter than the regular floor of the stall. Nail them



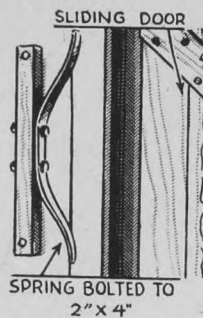
to two-by-six-inch bed pieces across the front and back of the stall. The whole false floor can be removed easily when desired.—F.M.S.

Moving Mired Equipment

We use this idea when a truck or tractor becomes stuck in mud. Heavy burlap bags are filled loosely with straw and tied securely. Two of these are always carried with each vehicle. When a machine bogs down we put one bag under each wheel and it has always given enough traction to move it out. The bags can be used several times with rubber-tired equipment.—L.W.C.

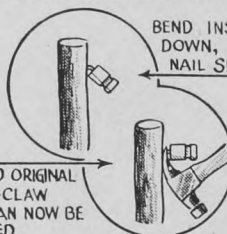
Door Stopper

Sliding doors get rough treatment if they are not provided with a stopper. The latter protects the door jam and saves needless repairing. The spring and its mounting can be taken from an old wagon seat. When they are fastened to the door frame with the ends of the springs projecting past the jam, they provide a cushioning effect as the door comes to the closed position.—A.F.B.



Saving Fence Insulators

Electric fence insulators can be removed very easily without breaking them. Lay the hammer handle across the insulator and bear down on it with both arms until the nail is bent



to about 45 degrees. Straighten it back up to the horizontal position and it will be found that there is enough space left to insert the claw of a hammer or of a wrecking bar. Pull gently with the hammer and very few insulators will break.—O.A.H.

House For Fido

I built a handy and comfortable house for our dog by using the felloes from a discarded wagon wheel. I removed the tire and sawed off the spokes as close to the rim as possible.



REMOVE TIRE, SPOKES—USE FELLOES AS RAFTERS

The felloes then fell into two parts which I used as rafters—one at each end of the house. Narrow boards served as sheathing and were covered with some roll roofing.—A.S.W.

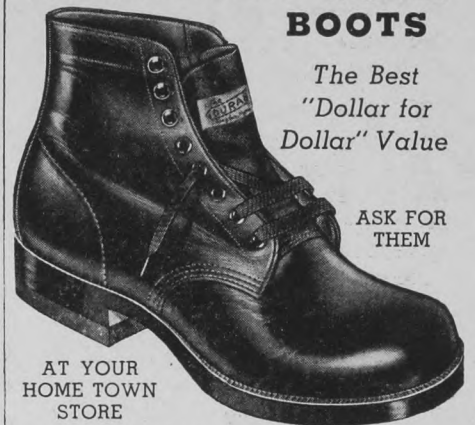
Tire Traction On Ice

Here is my way of starting a car which is stalled on ice or snow. I carry two small rolls of sheet roofing in the trunk. They are one foot wide and



four to five feet long and take up little space. When the car is stuck I place one under each wheel with the rough side up and can pull out or back up with ease.—J.H.J.

DURABILT WORK BOOTS



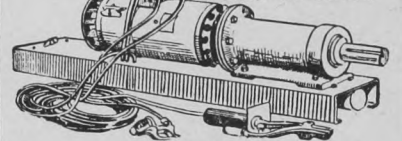
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Don't suffer needlessly from relentless arthritic pain. Get quick relief from dull, wearisome aches caused by Arthritic, Rheumatic, Neuritic, Sciatic pain, Lumbago or Neuralgia. Start taking Templeton's T-R-C's today. 60c, \$1.25 at drug counters. T-811

"Tree Stump" Vase

A discarded bottle and a can of putty combine to make an attractive vase

HERE is a unique little vase that will hold your bouquets of real or artificial flowers, and while it is very decorative when finished, is easily made from a few simple, inexpensive materials. The only articles you need are a small can of putty, and a small can of brown enamel.

The vase is made from a small, tall olive bottle, about six to eight inches high, fastened to a suitable wooden base. The base used in the article illustrated was a wooden wheel from a small toy, about four inches in diameter. The bottle sits near one side of the wooden base, leaving room for the "roots" of the stump which add to the appearance of the finished vase. These roots have a base of small pieces or chips of soft wood tacked to the wooden base around the olive bottle, and serve to hold the bottle in position as well as being a base upon which to build the putty roots.

The finished vase is shown in the illustration. With the bottle and the "roots" in place upon the wooden




A hand-made vase is given a close scrutiny.

base, putty is applied thickly to both the base and the sides of the bottle, clear to and covering the bottle's top. A little care is needed to make the putty stick to the glass surface, and if you first give the bottle a coat of paint and then allow this to dry before attempting to apply the putty, it may help to make the putty stick. After you have all exposed surfaces covered with the putty, shape it roughly into the form of roots and knots with your fingers, and set it aside for several days to dry before doing any more work upon it.

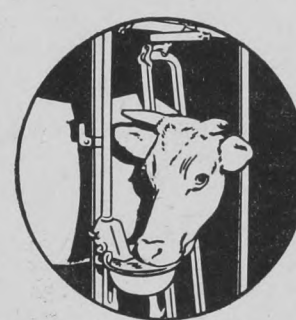
The rough, barklike finish is easily applied by gouging and denting the putty surface with the point of a pen-knife blade. When the entire surface of the trunk and roots have been given this rough "bark" surface, set the vase aside and allow it to dry for several weeks, as putty dries slowly. It will dry more rapidly in summer, but one must be careful that it does not get too warm, or the putty may slip downward upon the glass surface, making a mess.

When thoroughly dry, the putty surface may be painted with paint or enamel to a dark brown shade, resembling real bark. Paul Hadley.



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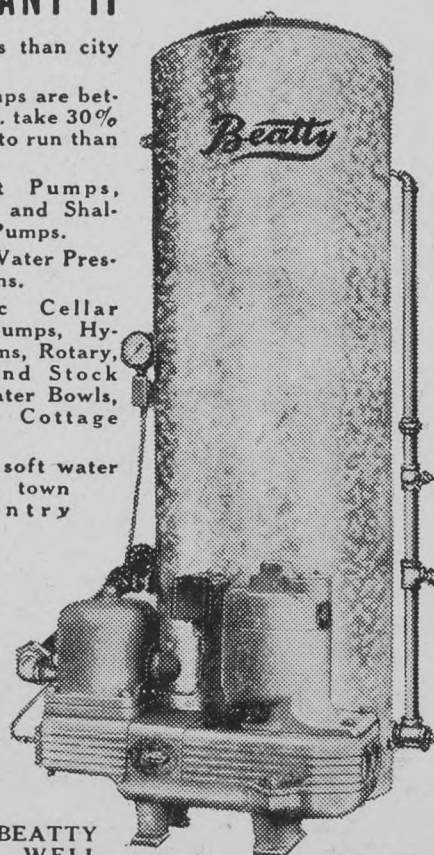
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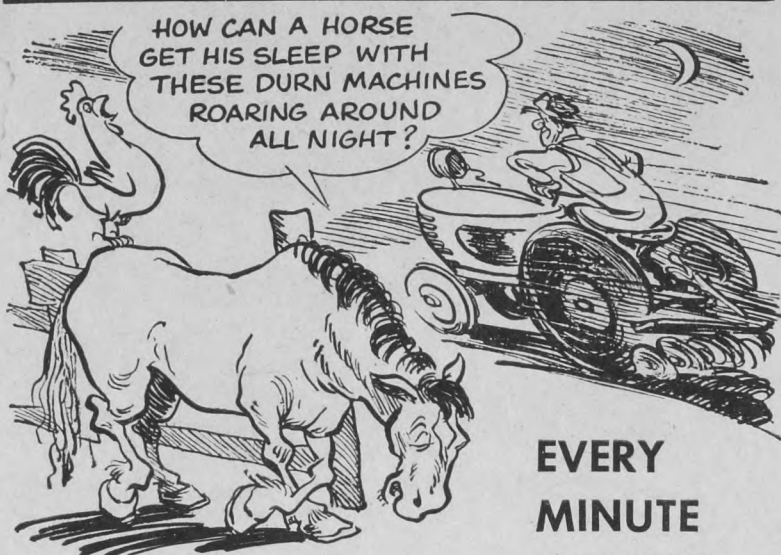
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MONTHLY

Prospects for Wheat Board Payments

For some months a major question in the minds of Western wheat producers has been the amount of final settlement to be made in respect of wheat deliveries to the Canadian Wheat Board during the five-year pool period which ended July 31, 1950. As this page goes to press that has not yet been determined. The Canadian Government has reopened discussions with the government of the United Kingdom in respect to the "have regard" clause of the wheat contract, and final payment presumably will have to await the outcome.

If that payment is to be long delayed the government can be expected to recognize farmers' present needs for money by authorizing the Canadian Wheat Board to make an interim payment on grain deliveries of the crop now being marketed, which, of course, would mean increasing initial payments on subsequent deliveries. That might well be done on wheat, oats and barley.

Quite evidently producers are justified in expecting sooner or later very substantial additions to initial payments already received. At the beginning of the current crop year the government dropped the Wheat Board's initial price from a basis of \$1.75 per bushel for No. 1 Northern in terminal elevators to \$1.40 per bushel. There was widespread objection to that decline and representations were made to the government that it was taking an unnecessarily wide margin of security in the light of prevailing markets and prices. Those objections have since been amply sustained by the course of market prices, and it is now seen that the government would have been safe against loss had it authorized a considerably higher initial price payment basis. This comment can be applied to all grades of wheat.

All export sales under the International Wheat Agreement have been made at the maximum price set in the Agreement. In Canadian currency this varies from time to time, depending on the exchange value of the Canadian dollar, and it is currently about \$1.89. Sales for domestic consumption in Canada have been made on the same basis. Export sales to countries outside of the International Agreement have been at a higher level. There is nothing to suggest that lower wheat prices are likely to prevail during the remainder of the crop year. Before its end at July 31, 1951, the Canadian Wheat Board will have disposed of most of the high grade wheat produced in 1950. The prospect is, therefore, that on the higher wheat grades the Wheat Board should realize about 50 cents per bushel more than the initial price, enough to provide very substantial further payment after all expenses of operation are taken care of.

With respect to lower grades and off grades the situation is less certain. Large quantities of such wheat will have to be carried forward into another crop year and marketed under whatever conditions prevail during that year. Sales so far made of such grain have been at spreads roughly corresponding to those which pre-

vailed in initial payments. But, after the stock of high grade wheat is disposed of the remaining stocks of low grades will be sold at prices which may be either higher or lower than those so far prevailing.

One misconception should be corrected at once, to the effect that no further payment is to be expected on low grades of wheat. Under the Canadian Wheat Board Act, and under market conditions which have prevailed this year, farmers have as much right to expect a further payment on low grades as on high grades. There is, however, as yet no possibility of calculating what the amount of such further payment might be. It may be lower than on high grades, but it could be as great or even greater.

Early in the season it was strongly argued that the initial payment ought to be increased by at least 15 cents per bushel on all grades. It can now be seen that was a safe suggestion. If high grades were separately dealt with a much larger increase could be made without any risk of loss.

The case is just as strong for an increase in initial payments on oats and barley, and an interim payment on deliveries already made. While the initial payments authorized at the beginning of the crop year were the same as those of the previous year, larger payments would have been justified by the strength of the market. wheat has increased as the crop year progressed. An interim payment could have been safely made during the past year, and probably the only reason it was not made was the expense which would have been entailed.

Now a great deal of work is involved in issuing cheques to every grain producer in western Canada, and still more when three different grains, and a multitude of different grades are to be covered. If interim payments on this year's crop were to be announced concurrently with the final settlement on the five-year pool it would probably be a long time before the final cheque could be mailed. But even if there is some delay in issuing cheques it will be a big help to farmers to know that money is on the way, and an increase in initial payments will immediately provide them with more money.

Once the question of interim payment is settled producers will be interested in getting final payment as soon as possible.

Under the Wheat Board Act as it now stands the Board could not make final settlement on any grades of grain until the whole year's crop had been disposed of. Because of the peculiar nature of this year's crop an amendment to the Act might be made under which the Wheat Board could settle for high grades of wheat as soon as sales are completed, which might not be long after July 31 of this year. Settlement in respect to low grades, of which presumably large quantities will still remain on hand could be delayed for a later period, with possibly an interim payment being made. Another way of dealing with the matter, which would also require an amendment to the Act, would be to make final settlement on all wheat deliveries while large quantities of some grades still

COMMENTARY

remain unsold. To do that remaining stocks would have to be valued, on the basis of expected sales price, and an allowance for carrying costs. The wheat thus inventoried could be transferred to the account of the 1951 crop, which would mean of course the transfer of some price risk to the producers of that crop. On the other hand the inventory might be taken over on government account, with the government carrying the risk.

It is quite probable that parliament will be asked this year to pass some amendment to the Wheat Board Act to enable one or other of these procedures to be followed.

Just as this page was going to press anticipated increase in initial payments were announced effective February First. These give 20 cents per bushel more on oats and barley and 10 cents more on wheat. Cheques for these amounts on deliveries already made should reach producers shortly.

Some Aspects of Inflation

Inflation is much in the minds of Canadian farmers at present, as shown repeatedly during the recent annual meeting of the Canadian Federation of Agriculture at Calgary. They are acutely conscious of inflation because it has added greatly to their costs of production, through higher prices of what they have to buy, and wage rates which they pay, directly and indirectly. Unfortunately, they find, it does not correspondingly increase the prices of what they have to sell.

Without attempting any complete exposition of the theory of inflation, some features of the present situation can be pointed out.

Inflation is sometimes described as a condition under which the supply of money increases more rapidly than the supply of goods to be purchased. That tends to make consumers bid against each other for scarce goods. The western farmer, producing mainly for export, finds that export prices are not responsive to changes in the value of the Canadian dollar. That is particularly the case with wheat. Canadian wheat, that is.

Wheat prices in the United States are responding to inflation, as is shown by quotations of the Chicago market in the neighborhood of \$2.50 per bushel. Farmers are withholding wheat from market in the expectation of still higher prices, and traders are eagerly buying it in order to protect themselves against price advances which they expect will occur in other commodities as well as in wheat. But wheat prices in that country are subject to special conditions which do not prevail in Canada, including price supporting policies of the government which serve to guarantee everybody against the possibility of any drastic declines, and, consequently, encourage both trading and the withholding of

supplies. The International Wheat Agreement does not operate as a depressing factor, in spite of the fact that it sets price levels for much export wheat well below the current market, because the government of the United States stands ready to subsidize the export of any wheat which the country may be called on to supply under the terms of the International Agreement.

It is different in Canada. This country supplies wheat to all countries included in the Agreement at the maximum price therein stipulated, which at the current exchange value of the Canadian dollar is just under \$1.90 per bushel. The same price is made to apply to all domestic sales. There is nothing in the Agreement to enable this country to increase the maximum price for export wheat just because the costs of the Canadian producer have been advancing.

There are other farm commodities, produced, not for export, but for domestic consumption, the price of which does not now respond to inflation, and of these butter and eggs are examples. These are not scarce, and there is consequently no need for consumers, no matter how well equipped with money, to bid against each other for supplies.

It must be admitted, however, that prices for beef and for beef cattle have been responding to inflation, and do reflect a decrease in the purchasing power of the dollar. And beef is not scarce in Canada, for we are exporting a great deal of it. But it is not the inflation in Canada to which the prices of beef and cattle are responding, but rather the inflation in the United States. Beef and cattle are scarce in that country, sufficiently scarce to draw all the supplies that Canada can spare. Beef is also sufficiently scarce to cause consumers in the United States to bid against each other for supplies, and labor there, with plenty of money to spend, is very willing to spend a good deal on keeping up its eating standards.

Inflation in the United States is also reflecting itself to some extent to the advantage of the Canadian producer of feed grains. Corn has advanced there, although not proportionately with wheat, being valued at approximately three cents per pound as against over four cents per pound for wheat. Export of Canadian feed grains to the United States is practicable, and prices in Canada tend to rise to levels based on such export.

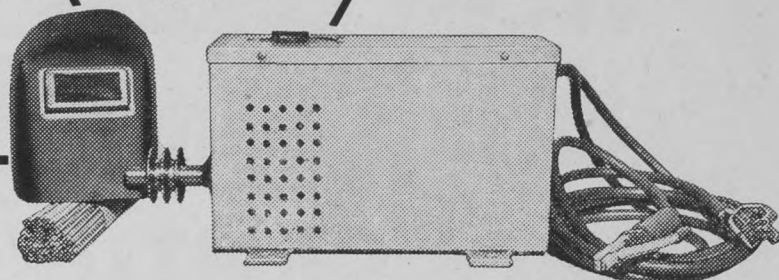
Quite evidently the subject of inflation presents a large field for study. One question which has emerged from study so far made relates to long-term price agreements, such, for example, as the wheat contract between Canada and the United Kingdom, and the International Wheat Agreement. When similar agreements come under discussion in the future it might be felt that price arrangements may have to be restricted to short periods. It may appear that it is dangerous to negotiate price agreements very far in advance, when production costs for a long period cannot be safeguarded.

Discussion of inflation, as it proceeds during coming months, may throw further light upon such matters.

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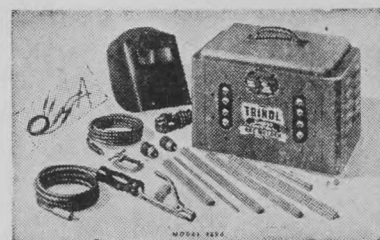
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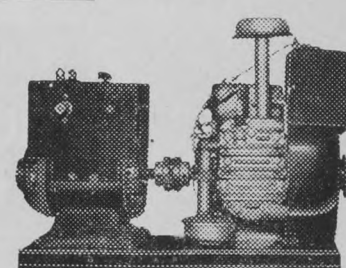
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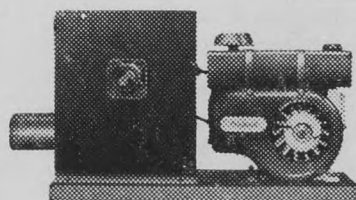
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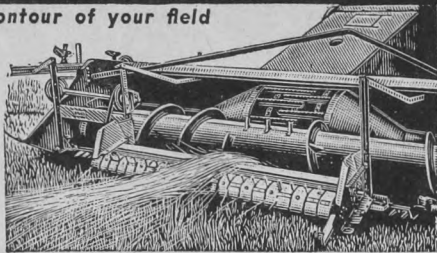
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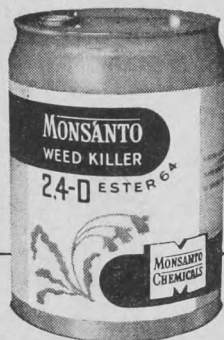
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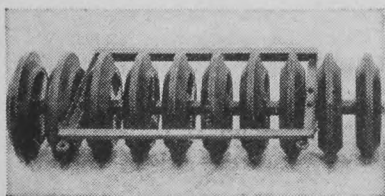
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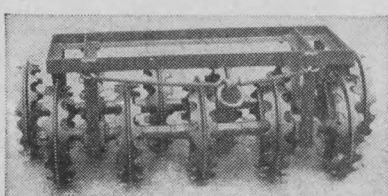
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Parson's Tongue

Continued from page 9

"Morton!"

"Yes, Mom. Okay, Pop: I'm sorry."

"Help me, Morton," the mother implored, trying to pry her fingers between the stiff flanges of the beater. "How ever did you get your tongue away out there, anyway?"

"Aaaaawwwgggghhhh!"

"I'm afraid I'm not getting anywhere, Prentice," Mrs. Tanner withdrew her fingers. "I never was any good with mechanical things."

MORTON studied the tongue and egg-beater combination from close range, poked his stubby fingers into the wires, then tried to turn the handle — which Reverend Tanner snatched away from him. The handle was firmly stuck, anyway. And so was the minister's tongue.

"It's getting awful red," announced Morton.

"Aaaaawwwgggghhhh! Aaaaawwwgggg! Awww!" sputtered the parson.

"Really, Prentice; I simply can't understand what you're saying," Mrs. Tanner protested, trying a second time to jerk the beater away from his tongue.

"Aaaaaawwwgggghhhh!"

Morton backed away.

"Pop's mad."

"Oh, hush, Morton. Don't just stand there. Do something!"

"Okay, Mom."

Morton bolted out the back door and made a flying leap over the caragana hedge that separated their yard from the Bodds', next door. It was Mrs. Bodds' day to have Mrs. Soapy Smith, the charlady who "did" for some of the town ladies. Mrs. Bodds and Mrs. Smith returned with Morton to the Tanner kitchen.

"Well, I never!" exclaimed Mrs. Bodds, staring at Reverend Tanner's tongue with fascinated interest. "I'd no idea a person's tongue was that long!"

"You ladies hold him," Mrs. Tanner suggested. "While I pull on the beater."

"Aaaaawwwgggghhhh!" uttered the minister, backing away from them.

"Oh, dear! He doesn't want us to do that—I do wish I could make out what he's saying."

"He's telling us to send for help," Mrs. Soapy Smith explained, matter-of-factly. "Hey, Morton! You go get Chief David."

Morton scooted out the door at full gallop.

"But why send for the police?" protested Mrs. Bodds.

"That's what police're for," Mrs. Soapy answered. "We pay taxes, don't we?"

"I wish I could think of something practical," said Mrs. Tanner. "Poor Prentice!"

"How about soap," suggested Mrs. Smith. "When a ring gets stuck on a finger, I allus get it off by smearin' soap on the finger. If we wet a cake o' soap an' smear it on his tongue, it might slip loose easy."

"It sounds dreadful," Mrs. Bodds said. "However, let's try it."

"Aaaaawwwgggghhhh! Aaaaawwwgggghhhh!" sputtered Reverend Tanner, red-faced and pop-eyed.

"But dear, we've got to do something!" his wife told him, wetting the soap at the sink. "Now hold still!"

The minister had backed into a corner, which was a mistake. Before he could get out of the way, the three women hemmed him in. His wife reached the moistened soap between the beater's wires and smeared it generously over those parts of his tongue that could be conveniently covered.

"Aaaaawwwggg! Aaaaawwwggg! Aagg! Agggg! Ggggg!" gagged the harassed minister, wrenching away from the women.

"He's gonna vomit," declared Mrs. Smith, reaching for a basin. "Here y'are, Parson!"

Reverend Tanner rushed to the sink and shoved his head under the tap, turning on the cold water. The gushing stream cleansed his tongue of the evil-tasting soap.



"I'm afraid that was a mistake," murmured Mrs. Tanner.

"You said it, dearie," Mrs. Smith admitted cheerfully. "Come to think about it, what we need's a plumber. I'll get Pete Popovitch—he's only a block away, across the back alley."

She was about to leave when Morton returned, panting, with Chief of Police David in tow, and Dooley Harper curious behind him. Dooley had given Chief David and the boy a lift in his grocery delivery van, which gave him the right to have a look at the Reverend Tanner's stuck tongue.

"I'll bet that hurts," said Dooley.

"Give me a hand," Chief David requested, getting hold of the beater. "You get your fingers through those flanges—Oh, darn! My fingers're too thick. Yours too, Dooley? Well, let's get a screw-driver and take it apart, then."

"There ain't no screws," Mrs. Smith informed him. "I looked. It's cemented with rivets."

"That's right," said Dooley. "But how the heck did you get into this mess, Reverend?"

"I was making Seven-Minute Icing," Mrs. Tanner volunteered. "He was licking the beater—"

"It was mine, by rights," Morton put in. "All I got was an ole spoon!"

"Never mind that," interrupted Chief David, a practical man. "The thing is, let's get him unstuck. You got a screw-driver, lady?"

"But it won't work, Chief," Dooley protested. "Look: it's all rivetted together, like Mrs. Soapy said."

"I'll go get Pete the plumber," cried Mrs. Smith, scuttling out.

"I never saw the like before," exclaimed Mrs. Bodds, fascinated by the minister's tongue.

"Sit down, Reverend, said Chief David. "This may take a minute or two, but we'll get you loose. Now: where's that screw-driver?"

"But Chief, it's rivetted!"

"Shut up, Dooley! I want it as a lever. Here it is. Thanks, sonny. Now, Reverend, you get your tongue down

on a level with this table-top, and we'll rest the beater on the table. Dooley, you hold the handle, so, while I pry the flanges apart with this screw-driver."

"I get you, Chief. Good idea!" Dooley took the handle from the minister, who seemed reluctant to part with it. "Now just brace yourself, sir, and we'll have you loose in a jiffy."

THE Chief applied pressure, the flange bent slightly, and Reverend Tanner cut loose with a strangled whoop of anguish.

"Is it loose?" asked Chief David. "Aw, no, it isn't! I don't believe I got the right flange, that time. We'll try again."

"Closer to his tongue," suggested Dooley. "Hold 'er down here again, Reverend—by the way, my name's Dooley Harper o' the Star Grocery, and I'm pleased to meet you."

"I'm Tom David," said the Chief of Police, formally. "Glad to know you, Reverend Tanner. Now then, Dooley, you try to twist that way when I give the word. All set, now? Go!"

"Aaaaawwwggggghhhh!"

"Gee whillikers," breathed Morton.

"Poor Prentice!" sobbed Mrs. Tanner.

"Is he gonna vomit?" asked Mrs. Soapy Smith, charging through the back door with a large, greasy-overalled man behind her. "Here's Pete Popovitch, the plumber. He'll get you out, quick as scat."

"Sonavagun!" marvelled Pete. "I never seen nothin' like this before. Gosh, that's really somethin', ain't it? Lookut that there tongue, all red an' mad. She's sure twisted up fancy."

"Can you get him loose?" demanded Chief David.

"Well, I donno. Onct I got a man unhitched from a wash-basin. He'd put down his head to rinse his hair—No, come to think back, he was bald! Anyways, he got his head jammed down under the spouts, like, an' one spiggot was in his ear while the other held him pinned in, sort of. All I hadda do was loosen the nut an' take off one tap an' he come out easy as nothin'. But this—Well, this here is somethin' else again, ain't it?"

"Where're your tools?" asked Dooley Harper.

"Sonavagun! This lady here, Missus Soapy, she got me kinda flustered up, see? I guess I kinda left 'em behind at the shop."

"The Reverend's gettin' cross-eyed," announced Mrs. Smith. "Stretch him on the floor, boys, an' give 'im a rest while Pete goes to work."

Reverend Tanner shook his head, preferring to sit in the chair and hold onto the egg-beater handle while gazing at them with the reproachful eyes of a sorrowful spaniel. . . .

"Get to work, Pete," Chief David ordered. "Get him loose."

"Well, now," said Pete scratching his head. "Sonavagun! Now I seen everythin'! Bet it hurts like—like—You're a parson, Missus Soapy sez? Parson Tanner, huh? I'm Pete Popovitch, over there on main street next to the General Store. Look, Boss, I figure this is a job for a weldin' man like McNevis. With his acetylene torch, he c'd cut through that there egg-beater metal easy as cheese, see?"

"Say, that's right!" agreed Dooley. "Here: I got my van out front. I'll go get Dugal McNevis right away. He'll hafta bring his portable outfit,

Farm Service Facts

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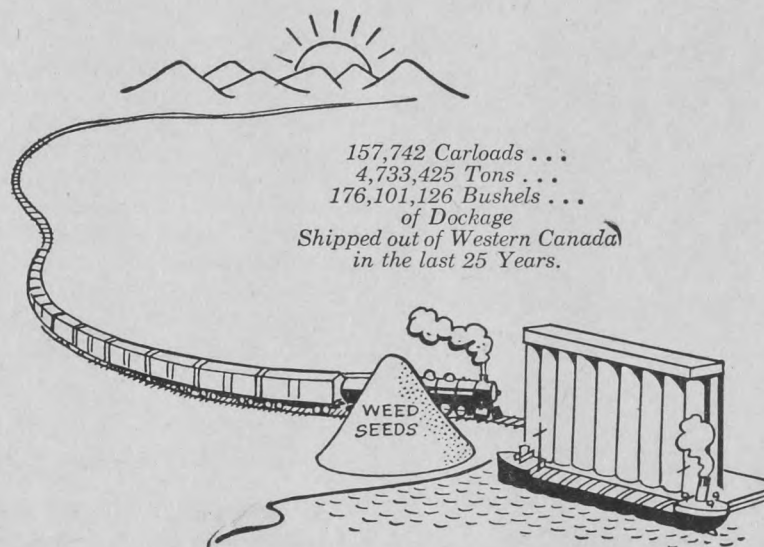


IMPERIAL OIL LIMITED

SELECTING, CLEANING and TREATING SEED GRAIN

Every year, Canadian farmers sow over 80,000,000 bushels of grain. The yield and quality of the crop harvested depends to a considerable extent on two things . . . weed-free seed, and plump seed with high germination. Weed seeds are still being sown at an alarming rate. Seed drill surveys show that up to 20% weed seeds are being sown by some farmers. With this in mind, it is not surprising that in

the past 25 years, 157,742 car loads of screenings have been grown with the grain, loaded and shipped out of Western Canada . . . representing a very heavy loss to producers. True, some of the dockage was produced from weed seeds that were in the soil . . . but a good deal of this loss could have been prevented by sowing clean seed.



Test Frosted Grain

This year, all seed grain should be tested for germination, particularly if coming from an area hit by frost last season. This applies especially to oats and barley, where the frost does not affect the outward appearance of the kernel as much as it does with wheat. When frozen or shrivelled grain is used, even if it does germinate, it

lacks vitality. If these young plants freeze down once in the spring, the crop is likely lost. You can get away from a good deal of the gamble by buying registered or certified seed. You will be assured of getting good plump seed, free from weeds and with a high germination.

Some Suggestions on Cleaning

If you are cleaning your own seed, and it is not convenient to take it to a central cleaning plant, a reasonably good job of cleaning can be done with air blast and sieve machines such as the fanning mill; or a Carter Disc, which makes separations based on the size of kernels. Whatever type of machine you use, the adjustments may have to be changed from those of last year, as the seed in many areas is liable to be smaller. All machines should be set level, securely fastened down, and turned at a uniform rate of speed. Air blast machines should not be set with the back close to the wall, as this interferes with the wind efficiency. Also, it makes it harder to change the sieves and screens.

Grain should be inspected from time to time as it comes from the mill. A good way to do this is to spread a small quantity thinly on a white paper, and examine it for weed seeds, cracked or small kernels. Recleaning should be repeated until the sample is up to standard . . . readjusting the mill to suit the seed. Some time before you are ready to start cleaning it is a good plan to put a few bushels through the mill to see if the adjustments . . . and in the case of the fanning mill . . . the sieves and screens, are suitable. Since the size of the sample varies from year to year, it may be necessary to add new screens or sieves. In any case, the trial run gives time to replace defective or unsuitable equipment.

Dust Treating To Prevent Smut

One of the ways to control oat smut, covered smut of barley, and stinking smut or bunt of wheat is by treating with a mercuric dust. Apply the dust at the rate recommended by the manufacturer. After the grain is dusted it should be kept in a bin or open sacks for at least 24 hours. During this period, the dusted grain should remain uncovered. Grain treated

in this way may be sown at once, or stored safely for several months. This dust is poisonous and should be handled with great care. The treating should be done either outside or in a well-ventilated building. Avoid inhaling the dust. Wear a damp cloth or dust mask over the nose and mouth. Do not feed treated grain to live stock.

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Next Issue of Farm Service Facts . . . Lubrication of Tractor and Machinery

the one he uses when he goes weldin' on them bridges the municipality was buildin'."

DOOLEY hurried out. Mrs. Tanner wet a towel with cold water and placed it tenderly around her husband's forehead. Seeing that, Mrs. Soapy Smith delivered herself of another suggestion.

"He needs a doctor. That's for sure. I'll just go fetch Doc Gray, down the street. Maybe he's out on call, because that young Missus Mabel Moseley, she's expectin' any minute now. But I'll go see if he's in, anyways. If he ain't, I'll bring back his nurse, Shauna Venables. She's been trained: she'll know what to do."

Out scuttled Mrs. Smith, leaving Chief David and Pete the plumber arguing about how they could bend the tough flanges of the beater with screw-driver and hammer. Morton had brought a hammer and saw, the house's full complement of tools.

"Hang on, Pop," the boy said. "I'm pullin' for you."

"Well, we can try it," said Chief David, grasping the hammer. "But those flanges are tougher'n you think, Pete. Hold your tongue down by the table again, Reverend, and we'll have another go at it."

Pete Popovitch was used to wrestling with the unfeeling resistance of corroded pipes and stuck valves, so he put muscle into his heave on the

screw-driver. Prentice G. Tanner nearly fell off his chair, uttering a stricken screech that made even Mrs. Bodds recoil in horror.

"No go," Chief David shook his head. "Sorry, sir. Just you sit there and take it easy. We'd best wait for Dugal McNevis's torch, Pete."

"Yeah. Sonavagun! I seen some queer things, Chief, but nothin' that beats this. Gosh, this'll be one for tellin' the boys, huh? I mean, at the plumbers' convention in the city, nex' time, huh? A parson with his tongue stuck in a egg-beater—whaddayuh know!"

"Is he loose yet?" demanded Mrs. Soapy Smith, charging in the back door. She seemed quite pleased when she saw the Reverend Tanner's tongue was still imprisoned in the beater. "Here's Doc Gray an' his nurse, folks. An' I was passin' Al's garage, anyways, so I just brung Al too."

"That's a nasty predicament," Doctor Gray said briskly, opening his black bag. "Miss Venables, he's suffering from shock, so we'll give him a sedative injection. Relax, friend—Haven't got around to meeting you yet, sir. I'm Bill Gray. This is Miss Venables, my nurse. Reverend Tanner, Miss Venables."

"How do you do?" smiled the nurse. "That's a silly question right now, isn't it? Just let me roll up your shirt sleeve, sir. This won't take a second."

"Won't hurt, either," Doc Gray said reassuringly, deftly applying the needle. "There! Now, then. Let's have a look at this tongue business. Licking the egg-beater, eh? Ohhhh, Seven-Minute Icing! That's my favorite, too. I've licked every icing mixture I can get my hooks on, but I never got into this kind of tangle. Al, you got any ideas?"

"Beats me, chum," declared Al. "I'd think, though, that if a fellow took this handle, here, and give it a quick little twist, like this—"

"Awwwwggggghhhh! Aaawwgghh!"

"Be careful, Al!" Doctor Gray pushed the garageman aside. "That's a pretty sore looking tongue, Mster. Miss Venables, did you replace that local anesthetic in my bag? Good! Look, Mr. Tanner, I'm going to freeze that tongue right now, and that'll ease things quite a bit. Combined with the sedative, it should make you reasonably comfortable. I hear that McNevis is coming with his torch, anyway, and you'll need to have that tongue desensitized before anyone else works on that beater. Just close your eyes a minute, sir. Chief, hold that beater, and hold it very still, please. All right now—thanks, nurse. Steady, now!"

"Awwwwoooo!" said Reverend Tanner as the needle jabbed into his tender tongue.

"Will he vomit?" Mrs. Smith asked.

"There, now!" Doctor Gray shot

home the dose and pulled out the needle. "You'll be okay in a minute. I see the sedative is starting to work, too. Could we have a couple of cushions, please?"

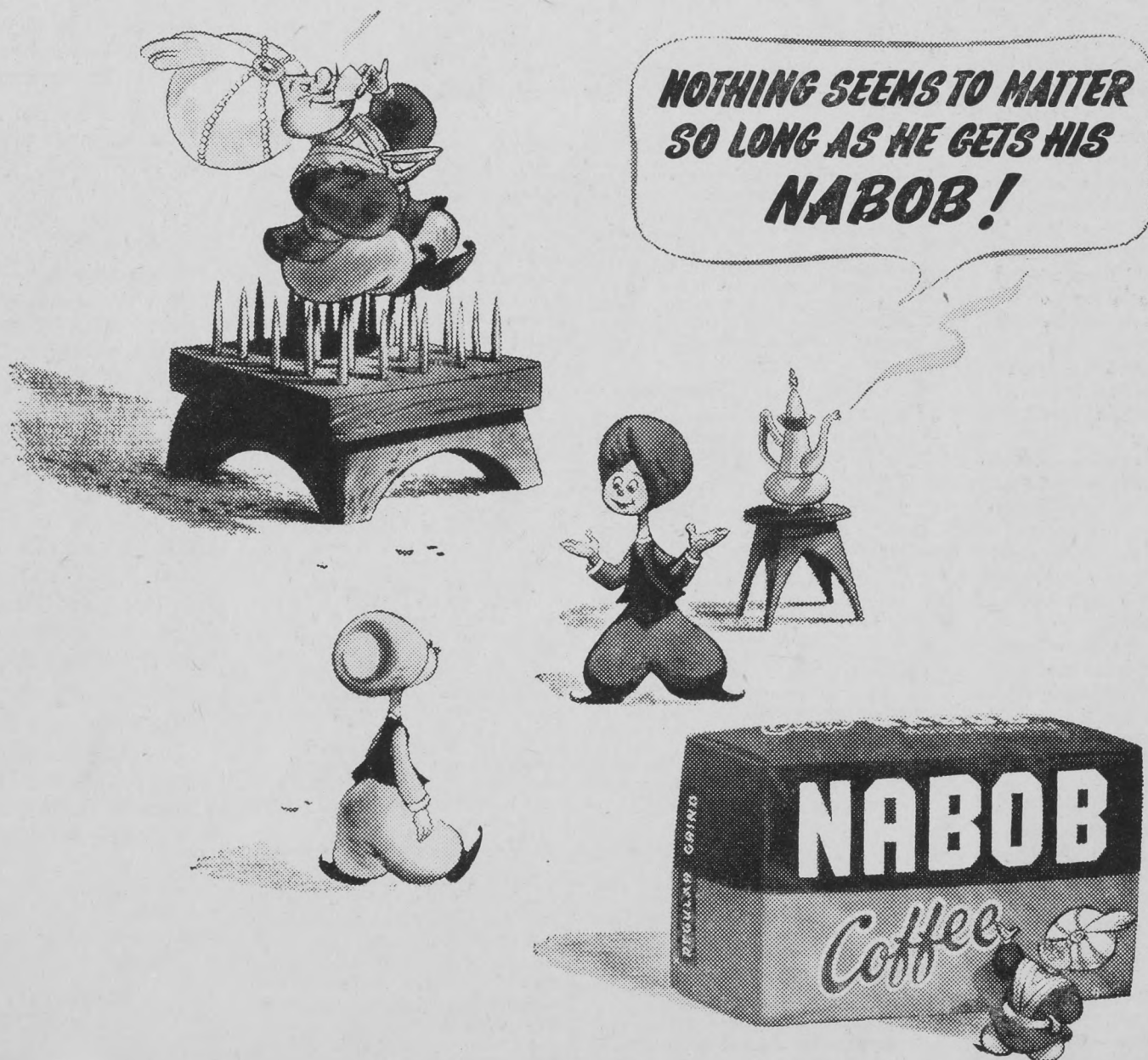
"Stretch 'im on the floor," suggested Mrs. Smith. "Let 'im rest in peace."

"Oh, it's not quite that bad," protested Doc Gray, winking at her. "But at that, you've got a good idea, Mrs. Soapy. When Dugal McNevis gets here, he'll need you on the floor, likely. More cushions, Mrs. Tanner—Now, don't you worry, little lady. He'll be all fixed up in no time."

"Here comes the welding truck!" announced Mrs. Bodds. "And Dooley Harper, too!"

DUGAL McNEVIS backed the portable welding unit into the yard, then brought his torch and coils of rubberized hose into the kitchen. He peered around curiously at the assembled crowd, nodding briefly.

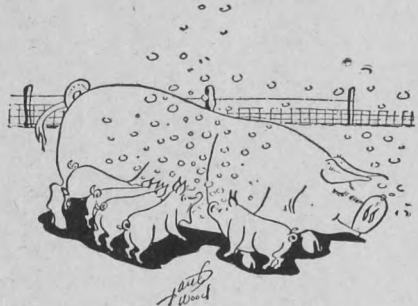
"Ah, weell!" Dugal stared at Reverend Tanner's tongue. "Ye'll be the new meenister? Ah'm McNevis, sir. An' noo that ah see the sorry state ye're in, ah'm verra much afeart ah canna help ye. Yon egg-beater, ma torch could cut it like a hot knife through warrmm butterrrr, but—This acetylene is fearsome hot, an' ah'm afeart the beater would get scorchin' red in the process. Ye'd never ding the dust oot of a pulpit again, if ah burnt your tongue aff."



"But what about the shield, Dugal?" asked Chief David.

"That's juist for the glare, mon. Maybe if ye wrapped wet cloths around the beaterrrrr—Na, na! It wouldna worrrk. The metal's too short between here an' his tongue, an' the whole gadget would get hot as the hubs o'—Well, it'd get muckle hot, onyways! Ah wouldna risk it, Reverend, much as ah'd like to help ye."

HIS announcement silenced the group. Pete Popovitch scratched his head. Chief David fiddled thoughtfully with the screw-driver. Doctor Gray stared down at Reverend Tanner's red tongue, and Miss Venables put another cushion under the minister's sedative-drowsy head. Mrs. Tanner wept softly, comforted by Mrs. Bodds



"Maybe Mom's drinkin' too much dish water!"

and Mrs. Soapy Smith. Al the garageman shifted his cud of snoose to another part of his fore lip and stared at the egg-beater. Dooley Harper looked very disappointed, while Dugal McNevis rubbed his stubby chin and felt badly about his inability to use his cutting torch.

"Mom!" cried Morton. "Here's that carpenter to fix the back step."

The carpenter peered through the screen door, surprised at the crowd in the kitchen grouped around the prone figure on the floor.

"My Pop's got his tongue stuck in an egg-beater," Morton told him. "We can't get him loose."

"That so? Why not?"

"Come in, Cressman," Doctor Gray invited. "We've run out of ideas."

Cressman looked down at Reverend Tanner's tongue.

"I'll be dog-goned!" he murmured. "Why don't you boys take it apart?"

"How?" demanded Chief David.

"No screws!" cried Mrs. Smith.

"Dugal can't cut it," explained Pete Popovitch. "The metal, she'd get hot an' burn off the parson's tongue, an' a parson without no tongue ain't no good for nothin', see?"

Cressman glanced at them all in a pitying way, then pulled a pair of side-cutters from his pocket and hunched down on the floor beside the Reverend Tanner.

"Awwwwgggghhhh," muttered the minister, sleepily.

"Sure is," agreed Cressman, snipping with his cutters. One flange was neatly halved. Snip! Another fell apart. Snip-snip! The two main frame wires were sundered and the minister's tongue slid out of its sticky prison.

"Hip! Hip! Hoorarr!" yelled Mrs. Soapy.

"Oh, bless you!" cried Mrs. Tanner, fervently. "Prentice, are you all right?"

"Awwwwuuuuuu!" nodded the minister, smiling gratefully but sleepily at Cressman and the rest. "Ank'ool!"

"Sall right," nodded Cressman. "Now, ma'am, how did you want that step fixed?"

"That can wait, you wonderful man!" beamed Mrs. Tanner. "Sit right

down here. And the rest of you, too—Morton, bring chairs. Mrs. Bodds, would you finish icing that cake while I put on the kettle? This calls for a celebration, and that's one cake the Ladies' Aid Tea can do without. Oh, my—I'm so relieved!"

THEY had quite a party, there in the Tanners' kitchen, with the minister snoring softly on his cushioned couch in the middle of the floor while Mrs. Soapy poured, Shauna Venables passed, and Doc Gray and Chief David told jokes and kept everybody laughing. Cressman the carpenter was the guest of honor, of course, and got the largest piece of cake.

And that's how the Reverend Prentice G. Tanner became popular in our town of Willowdale. The next day, Sunday, his church was jam-packed with people. Cressman, belatedly proud of himself, was right up in the front pew with all his family. Every member of the Bodds household was there; so was Mrs. Soapy and her crony, Mrs. Beulah Gainsborough, dressmaker and alterations to order. With them was Miss Hann, who cleaned and dusted after hours in some of the business offices. Doc Gray was present, wondering how the Reverend Tanner would sound after having his tongue held in an egg-beater all Saturday morning. The doctor brought his wife, too; actually, it was Mrs. Gray who insisted on them attending church that morning, because she was suddenly curious about the Tanners. Al the garageman, his wife and mother-in-law were all prominent in their Sunday best; so was Pete Popovitch with his Missus and four children: "This is somethin' special, see? I seen it myself, an' you c'n take it from me, he's got the longest tongue in town!"

Chief David attended, also Dooley and Mrs. Harper. Dugal McNevis gave up a pleasant morning's browsing in his beloved flower garden just to find out how the new minister made out after his horrible experience. In fact, it seemed like half the town was crammed into that church on that lovely Sunday morning, and the choir sang out loud and joyful.

Reverend Tanner preached an extremely short sermon, because his tongue was swollen and very sore. But what he said was sincere and good, so his numerous listeners were quite pleased. They almost felt like cheering Mr. Tanner. Any minister who likes to lick Seven-Minute Icing in his wife's kitchen must be an ordinary, plain-folks sort of fellow you can get along with comfortably, they told each other, and the church's board of managers stopped mumbling and began to brag about getting Tanner to answer their "call." And when the minister went with young Morton to the river back-water on the next Saturday afternoon, the angling fraternity greeted him jocosely.

"How's the cake icing today, Parson?"

Reverend Tanner laughed as long and as loud as any of them, and personally told them how it felt to have Mrs. Smith's soap treatment smeared all over his tongue. He didn't catch a single fish himself that day, but the minister carried home more pickerel for supper than the Tanners could use. Willowdale and the new parson had become friends.

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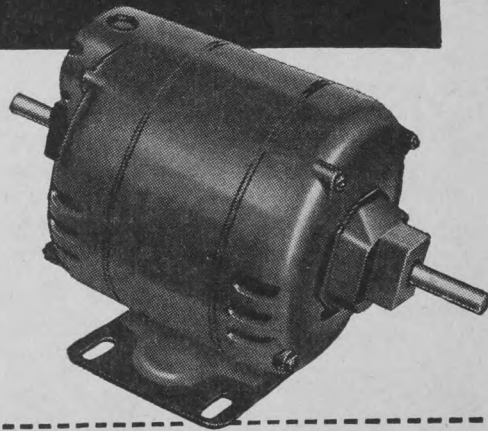
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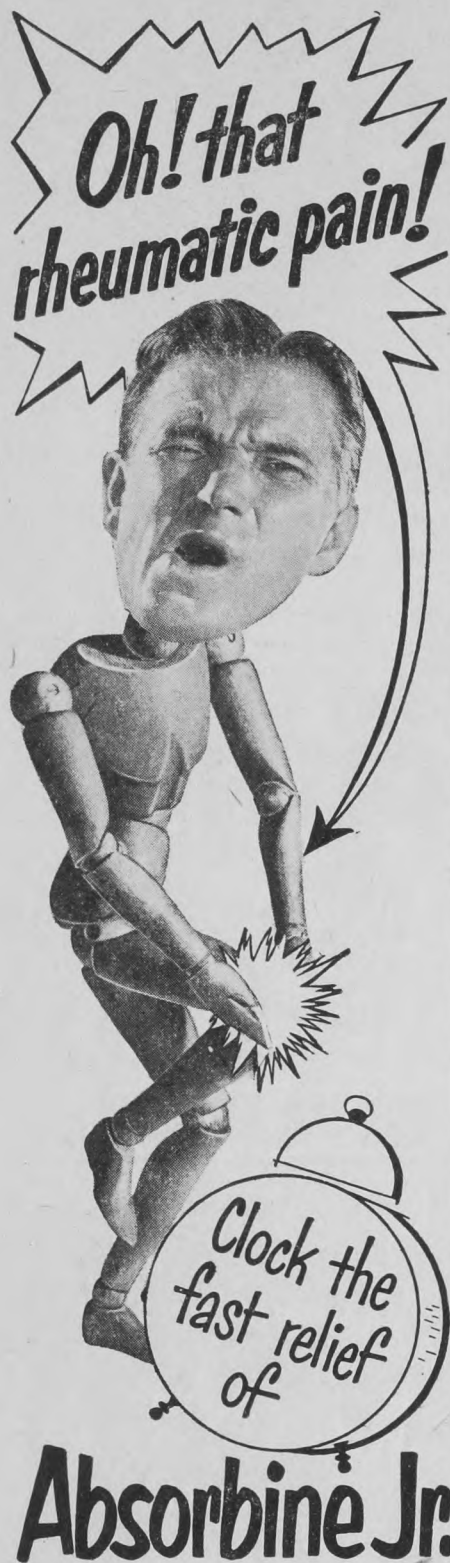
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The Nicklason farmyard at Deadwood, Alberta. Note the cleaning plant in the right foreground.

[Guide photo.]

PEACE RIVER FARMER

ON May 6, 1928, John Nicklason walked down the gangplank of the ship that had carried him from Sweden, and looked out across a new land. He had a strong back, an active mind, a will to work, and little else. Today he owns 640 acres of Canadian soil, and on it he raises registered seed of a quality that this year brought him a second in wheat at the Toronto Royal, and a twelfth at the Chicago International.

In the 23 years since John came to this land he has dug stones and broken Saskatchewan prairie soils, and he has bucked brush and torn up the soil in northern Alberta. He has fished the rough waters off the Pacific coast, tramped the hills and valleys in search of game, and built houses in Vancouver. In all these diverse fields of endeavor he has taken a real pride in his power and will to work.

When Nicklason arrived in Canada he went directly to Renown, Saskatchewan, some 80 miles south and east of Saskatoon. After a couple of years there he joined the general drift to the new and promising Northland. Homesteading at Deadwood, Alberta, about 50 miles north of Grimshaw, he stayed until 1934, when having rented the homestead, he moved to the Pacific coast.

The natives say that if you once get the Peace River country into your blood you will never get it out. That may be part of the reason that in April, 1943, Nicklason was back in Deadwood. Nick—as he is called by his family and neighbors—took his homestead back from the renter, and in June he and his family moved into the old log house he had put up years before. His wife—a Winnipeg girl—had never been on a farm before, but it was an easy conversion to one of her determination.

He bought another quarter that summer and began to put up a house and a log barn. By spring a good set of buildings was completed and ready for use. He put lights and a gravity water system in the house. Water is pumped from a large cistern in the basement into a 60-gallon gravity tank from which it runs down to taps above the basin, bath tub and kitchen sink. Electric power comes from a gas driven generator.

NICK bought a third quarter in 1944, and grew a good crop of commercial grain. He became interested in raising a higher quality product, and in the spring of '45 he sowed registered seed. Unfortunately he did not take off registered grain in the fall. His fields were clean enough, but were not properly isolated, and failed to pass inspection. Nick did not then know that it is necessary to have cultivated strips between different varieties grown for registration, and be-

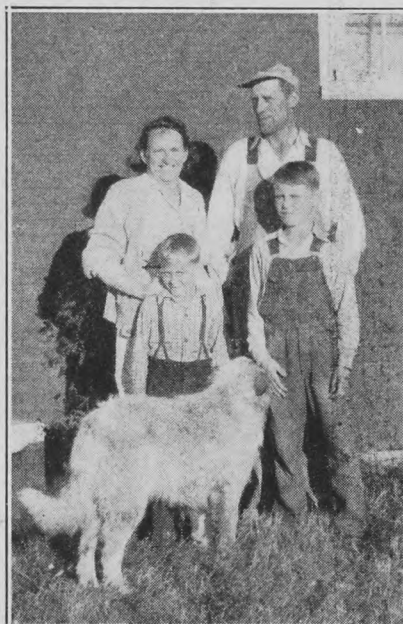
John Nicklason raises pure seed on his farm at Deadwood, Alta., 412 miles north and west of Edmonton

by RALPH HEDLIN

tween registered and other crops.

He wrote to the Canadian Seed Growers Association in Ottawa, and received their regulations. The next year he again planted registered seed and this time had no trouble in getting it passed.

When I called last fall he was cutting registered alfalfa. He harvested 46 acres of this crop, 116 acres of registered Thatcher wheat, and 55 acres of registered Victory oats, besides commercial crops. He seeded another field to alfalfa last spring, and, though registered seed was planted, he will not have the crop field in-



[Guide photo.]

John and Mrs. Nicklason, and the boys.

spected until 1952. He has found that if he allows alfalfa to grow for a couple of years before applying for inspection he has a cleaner field. In two years alfalfa will kill out all weeds except the native grasses, and cleaning will remove grass seed.

Nick decided that there were three factors of primary importance in the raising of pure seed. One was to use clean seed, another was to have the field clean, and the third was to do a thorough job of cleaning the seed before selling it. He found himself satisfied on the first two counts, but not too well pleased on the third. In order to correct this suspected weakness, in the summer of 1948 he put up a large cleaning plant.

The cost of the plant was kept to a surprisingly low figure, considering the extent and completeness of its machinery and bins. Nick cut dimension timbers from the woods, and built

the entire plant himself. He also made the pulleys and installed the machinery.

The plant includes a number of bins. There are two bins for cleaning grain, and single ones for screenings, sacking, custom work and storage. A different set of screens is used to take out weeds that were not removed the first time. The grain is run into the sacking bin, from which sacks are filled and weighed on a scale below.

The nearest railway is in the town of Grimshaw, 53 miles to the south. When shipping commercial grain Nick has taken in three truck loads in a day, though he admits that it is a long day. On one occasion he had five trucks hauling, and took in 5,000 bushels in two and a half days. The charge for hauling to the elevator is 10 cents for wheat and 5½ cents for oats.

Nick is careful not to transport weed seeds on the machinery from one field to another. He has a dugout on each quarter, and has provided himself with a gear pump so that he can drive a hard stream of water over the machines and wash off all foreign matter.

THE by-products of seed production are marketed to advantage through livestock. Nick weans about 30 small pigs every spring, and markets his screenings through them. The cattle on the place are fed alfalfa straw 12 months in the year. He has found that he can get larger returns from his fields by growing seed crops than by raising hay. By this method he utilizes alfalfa straw, turns it into beef and gets a cash return for a product that otherwise would be wasted.

The handling of the straw is well planned. While it is a convenience to have it in the loft in the winter, it is not convenient to haul it in during the rush harvest period. Nick has found that if he threshes the straw a second time he gets enough seed to pay expenses. Consequently, after fall work is done he sets up the machine in the barnyard, runs the alfalfa straw through, and blows it into the loft. This places the straw conveniently for feeding, breaks it up so that it makes better feed, and especially if the stooks were at all damp when originally threshed—reclaims considerable seed.

Many more things could be written about John Nicklason and his wife. John was building a beautiful, three-roomed school near Deadwood at the time of my visit. He is making rapid strides in pure seed production. He and his wife are indefatigable and courageous, and in a comparatively few years have built up an attractive home, a productive farm, and John has become an exemplary Canadian citizen.

Soap Drama

A short, sharp tragi-comedy which did not go over the air

by CHRISTINE A. McLEAN

RECENTLY I felt what the family calls my "economical streak" stirring to life once more. The cost of living continues to rise and I really must find some way to cut down. But where?—Soap! I'll make my own—plenty of people do it. Why my grandmother could do that with her eyes shut. Look at the profits soap manufacturers must make, the contests they put on, the prizes they give. I'll beat them at their own game and make all the profit myself.

All you have to do is save some fat. Anything, beef, bacon, deer, etc. Next it has to be clarified, which is boiling it all down together in hot water, then let it settle, which takes out all the salt and foreign matter. This I proceeded to do, but reckoned without the odor of old fat boiling. The place smelled like a rendering plant for defunct livestock. I opened the doors, and the neighbors came out of their houses and sniffed suspiciously, then put in a call for the sanitary inspector for an investigation.

Then the fat boiled over and got down into the element of the electric range and ruined it, costing me \$12.50 for a new one plus installation costs. You add lye to the fat and stir—not too much! How much is too much? The temperature must be not too hot and not too cool, but I dare not stick a finger in it to try it or I would probably be minus the finger for life. The lye must be dissolved in cold water in a crock and then cooled before mixing. Cautiously I dumped the lye into the water and stirred. It sizzled and fumes got up my nose. I gasped and wondered if my lungs would be burnt out, but told myself sternly that soap was being made every day, thousands of tons of it. It was quite a simple process. Crack-k-k-k! What was that? Why the crock had split from the heat generated in the solution and the lye trickled all over the basement floor eating up everything in its path.

IT began to seem a bit complicated after all. I got some more lye and started again. This time I got to the stirring stage. Why it's easy, just stir and then pour into a wooden box lined with a cloth. Let stand a few days and then cut in bars. I had set the box on a chair in the kitchen. Did I stir too much or not enough? Anyway, clear lye and water trickled from the bottom of the box; spread over the chair and ate all the paint off, down on to the linoleum and ate through to the burlap or cork or whatever it is. I grabbed the box and ran outside with it setting it on the porch where it gnawed off all the paint! Finally I got the mess cleaned up and looked around ruefully at the damage. Element, linoleum, crock, paint and possibly TB. Add it all up and divide by the number of pounds of soap I might have obtained had I not thrown the product out in the garbage.

After this I'll let the soap manufacturers do it. Let them make their profits, give their prizes, put on programs. Maybe I'll enter a soap contest, it might be easier in the end.

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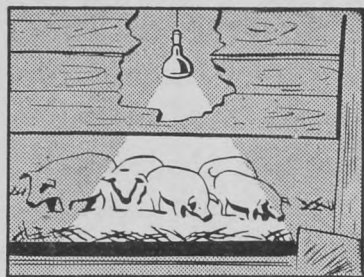
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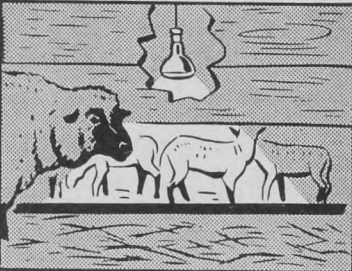
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Operation Mothball

A sheep man in Alberta's bush country fights a successful defensive action against the coyotes

by FREEDA FLEMING

FARMERS and ranchers all over Alberta have taken tremendous losses the last several years from coyotes, until the hue and cry became so great that some sort of government assistance was offered to try to reduce the numbers of these sly predators. In Alberta, and in others of the western provinces, coyote hunts were organized at which many coyotes came to a sudden and violent end. Still there were large numbers of them left roaming at large, to the sheepmen's sorrow.

In this section of west-central Alberta, a coyote hunt is a difficult thing due to the heavy bush and muskeg terrain, which create a coyote "heaven." Ranchers' losses have become so great that many have sold their entire flocks of sheep in utter defeat.

A veteran sheep man, H. Smith of Dovercourt, 15 miles south of Rocky Mountain House, studied the problem

feed lots for winter, so were safe until spring. Returning to Dovercourt for the lambing season, he unpacked his working clothes to go to work, and was assailed by the reek of mothballs which had nestled among his woollies all winter. What a ghastly smell! He wished his wife would not insist on such a liberal use of them. Suddenly he stopped, half into his clothes, and let the idea take shape in his mind. The very thing. Mothballs! Readily available. Easy to carry. And cheap—cheap—cheap. It certainly was worth a try. Goodness knows they smelled strong enough if that was any asset.

SO he purchased five pounds, all he could get in town. Filling his pockets he started on his rounds of fence inspection before turning the lambing ewes into their pasture. As he walked the fences he dropped a mothball at each fence post and about two between. By the time he had the



Hank Smith of Dovercourt, Alta., looks over some of his sheep protected in Operation Mothball.

as he patrolled his pastures and marked the signs of lambs slaughtered by the many coyotes who found perfect shelter in the bush and muskeg surrounding his land on three sides. He tried everything he had ever heard of to kill the killers—traps, poison, guns. He got a few, of course, but there were far too many left. And all the time his flocks were raided in broad daylight, and his losses mounted.

Mr. Smith remembered how in the early days on the prairies he had heard that coyotes were so afraid of the first wire fences that they would not cross them. Unfortunately they soon lost that fear and would not only go through or under them, but were seen to run up the braces of woven wire fences and jump down on the other side. One thing it proved, though, the coyote was a very timid and suspicious animal, when it came face to face with something unusual.

If they had been afraid of fences, reasoned Hank, wasn't there something else he could use that would stimulate their native suspicion.

He went back to Vernon for the winter without arriving at any solution, but the plan lay in the back of his mind and nagged at him for a solution. The sheep were in yards and

fence inspected and repaired, he had an almost invisible trail of mothballs around each pasture. Invisible, but very, very smelly. A coyote, with its keen sense of smell, should detect it from far off.

Time passed and nothing happened. Tracks showed the wary animals came near, but their noses warned them off and they circled away to try a different approach. Each time before reaching the fence, they retreated in suspicion, and tried another place. In the meantime the ewes lambed in safety a scant half-mile from the hungry coyotes. A month after the mothballs were scattered, heavy rains fell, so Hank renewed them as soon as the weather cleared. Many old mothballs were still to be seen, though they had shrunk to the size of peas. One more renewal late in the summer saw the sheep safely through to autumn.

THIS experiment had been watched closely by neighbors. The results seemed to justify the time and expense, for during the summer, not one lamb was lost to coyotes, and their only protection had been mothballs. Many declared themselves ready to try it next season, while some few scoffers declared their unbelief. But in the

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meantime they could not deny their losses of 40 or 50 lambs and ewes during the summer.

Hank's own explanation of how it worked was simple. He stressed the need to put the protective path some distance from the pens and folds. A coyote, confronted by a juicy lamb a few rods away, would disregard caution in order to carry off its prey. The idea seems to be to have the farm surrounded by the path of mothballs, over the hills, through heavy bush, across muskegs, and cover every avenue of approach where the coyotes would try to slip through. As the animal came within sniffing distance, his tracks showed he hung back, investigating the strange scent. Not being able to figure it out, he circled away, and tried a different path, only to be stopped again in a short distance.

Last summer Hank estimates he used about 15 pounds of mothballs, but he again had perfect protection, and did not lose one lamb to coyotes, while the losses of his neighbors ran into many hundreds of dollars. He says wryly that perhaps some of his coyotes gave up in disgust and moved over to the neighbors where pickings were easy.

THE local druggist tells with delight of the day Hank came into town early in the spring to get his supply of mothballs. Handling them, as he had been doing, he reeked strongly of their penetrating odor as he came into the drugstore. A pretty young girl clerk, new in town, came to wait on him. When he asked for 15 pounds of mothballs, she didn't believe her ears, so she started to parcel out 15 cents worth for him. He stopped her, saying it was 15 pounds he wanted. Her eyes fairly popped as she asked what he wanted that many for.

When he leaned confidentially across the counter and said he was a dressy devil and liked to keep his clothes in good shape out on the sheep ranch, she fled in terror to her boss' office, crying to him through chattering teeth that there was a crazy sheep herder in the store. Investigation showed the druggist who the man was, a man well known for his joy in teasing a pretty girl.

There are faults with the scheme, of course. They crop up as you find when you try it. For one thing, rain and snow neutralize the mothballs. In a rainy summer, it would probably keep you busy putting out fresh mothballs between rain storms. The last two years have been unusually dry here, so it worked very well. A recent snowstorm showed coyote tracks crossing the trail of mothballs without any pause to sniff or investigate. On large sheep ranges covering thousands of acres, it would be difficult to outline the entire area. The only suggestion here is that if the range is fenced, the balls can be dropped while riding the fences.

Mr. Smith hopes he, or someone, may discover something as cheap as mothballs, but something impervious to weather, that will require only one handling in a season. Then, of course, the coyotes may lose their suspicion, as they did with fences, and something new will have to be substituted. In the meantime, mothballs are saving many lambs here in this district, as neighbors tried it for the first time last summer and today report not one loss to coyotes.

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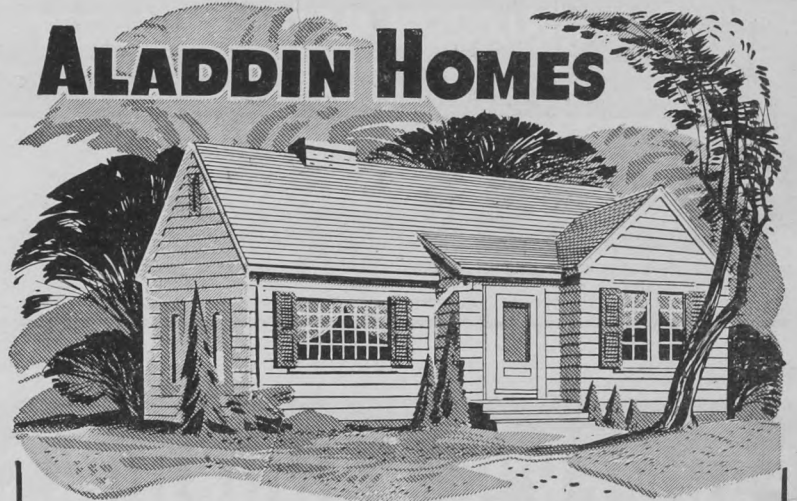
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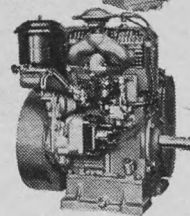
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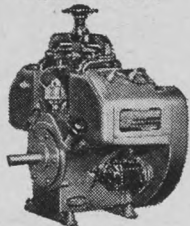
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A Farm Grain Dryer

A home-built grain dryer with a capacity of 250 bushels per day which can be built for approximately \$500

by EVAN A HARDY and ERIC MOYSEY

A VERY successful grain dryer was built in 1941 and is being used by Messrs. C. A. Fawcett and Sons at Consort, Alberta. The Fawcetts operate a District Experiment Substation in co-operation with the Dominion Experimental Station at Scott. They are farming about 3,000 acres of land, about 1,000 of which is sown to wheat annually.

Having such a large acreage in wheat, they were frequently compelled, before harvesting season had advanced very far, to thresh tough or even damp wheat. Since this kind of wheat could not be safely stored and since they were unable to have it dried by the elevators, they decided to construct a dryer which was cheap, reasonably fast, and could be used on the farm.

In due course of time, a simple and cheap plan was worked out, the dryer was built and is now working successfully. It has a capacity of approximately 250 bushels per day, with a cost of about two cents per bushel for fuel.

The principle incorporated with this dryer was to have warm air pass through a wall of wheat. A wall, six inches thick and seven feet high was made with galvanized window screening. If the wall was in one section, it would be 100 feet long, but, instead of having such a long structure, the wall was built in sections and enclosed in a building where it could be easily filled and emptied as desired. In this building, air, heated over a fire, could

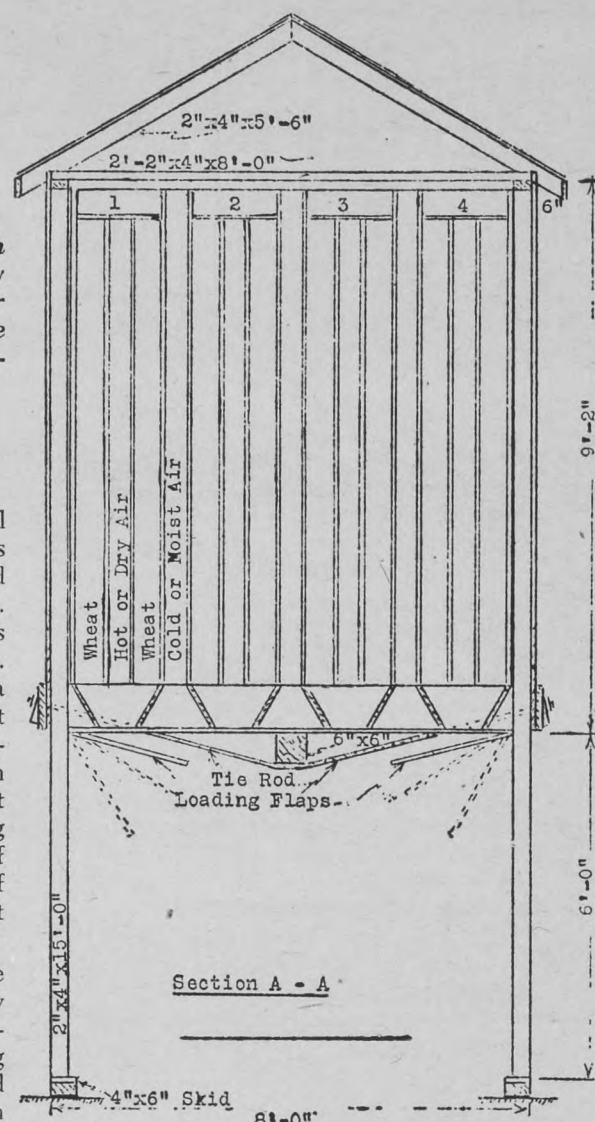
be made to pass through the wheat and absorb excess moisture. When the wheat had dried sufficiently, the hollow walls were emptied and then were ready to be filled again with tough wheat.

The construction of the dryer requires careful workmanship. The building must be securely built and braced to prevent sagging or twisting. The dryer must be carefully built without leaks through which grain might trickle. The screen should be lapped so as to carry the downward flow of the wheat and should be held securely in position by staples and by one by two-inch boards nailed to the two by six-inch studs with shellacked box nails.

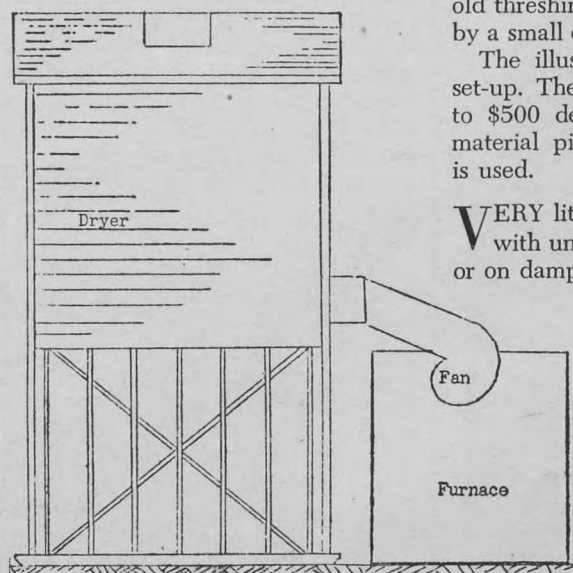
The source of heat is a gas-barrel stove, designed on the principle of a pipeless furnace. Coal is used as fuel. The warm air from the stove is blown through the grain by a blower from an old threshing machine which is driven by a small engine.

The illustration shows the general set-up. The cost will vary from \$250 to \$500 depending upon how much material picked up around the farm is used.

VERY little drying can be obtained with unheated air during the night or on damp, cold days when the air is already filled with moisture. Moisture may even be added to the grain under these conditions. Some drying can be accomplished by blowing unheated air through the grain in warm, dry weather, but it may take several days to lower the moisture content by two

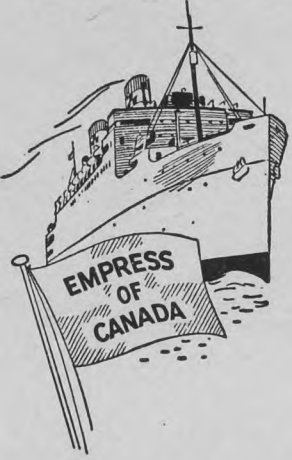


Section A - A
Cross section showing alternate "walls of wheat" and vents for movement of air.

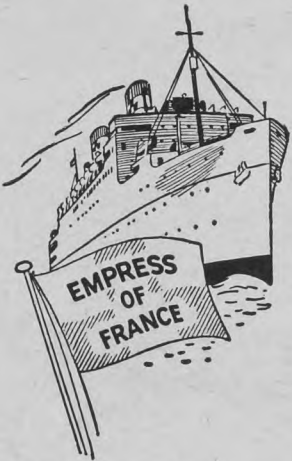


Side view of dryer.

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or three per cent. Since the air will usually be quite cold and damp when it is necessary to dry grain, it is not advisable to build a dryer without incorporating a furnace of some sort. On the other hand, grain which is heating in storage can be cooled to within a few degrees of atmospheric temperature by four or five hours of power ventilation at any time, summer or winter.

Where a considerable quantity of grain is to be dried, a fast rate of drying will be desired and it will therefore be necessary to heat the air. If the moisture content is to be lowered by three per cent and a drying rate of fifty bushels per hour is required, a fan capable of delivering 2,500 cubic feet per minute against a static pressure of one-half inch of water should be selected. A centrifugal type fan with a wheel 15 to 18 inches in diameter will be suitable and it should be operated at from 400 to 600 r.p.m., depending on the exact type and size. The area of the outlet will probably be 1½ to two square feet, in which case the area of the main duct leading to the dryer should also be 1½ to two square feet. Such a fan will cost about \$75 new and will require less than one horsepower to operate. A surprisingly large furnace will be required to supply heat for the operation. If it is oil-fired, the burner should be capable of burning two gallons per hour efficiently; if coal-fired, it should have a grate area of about six square feet. The cost for fuel used in drying will likely be less than two cents per bushel, the exact cost depending on how much moisture is removed and on the outdoor temperature.

THE fan and furnace sizes outlined in the above example were selected for a particular condition which was to lower the moisture content of 50 bushels per hour by three per cent. If a different drying rate is desired, all quantities will be changed in proportion, with the exception of the static pressure. Static pressure is an indication of the resistance to air flow and therefore will vary with the quantity of air flowing and with the thickness of the layer of grain through which it passes. In the dryer illustrated, the grain is arranged in eight layers, each of which is six inches thick. In some other type of dryer where the grain is arranged differently, the resistance to flow will vary with the thickness of the grain and with the rate of air flow per square foot.

A considerable saving in heat can be achieved by passing all the exhaust gases through the grain. Reports indicate that little if any damage is caused by the smoke. Under most conditions where heated air is blown through grain, more moisture will be removed per pound of fuel burned with high temperatures than with low temperatures. Consequently, if the furnace does not have enough capacity to give high temperatures at the suggested rate of air flow, higher efficiencies will be obtained by reducing the air flow and allowing the temperature to rise. The air temperature should not be allowed to rise much above 120 degrees if the grain is to be used for seed. In other cases 160 degrees should do no harm to the grain but may constitute a serious fire hazard.

In some parts of the United States, large quantities of grain have to be dried every year. Many farmers in

these areas are equipping one or more of their granaries so that they may be filled in the usual way and the grain dried in them at some future date. One practice is to place a perforated false floor in the bin so that air may be forced in under it and distributed uniformly to the grain above. In another method, a system of main and lateral ducts, which are actually inverted troughs, is used to introduce air into the grain. In either case, the floor and sills should be sealed up with a reinforced building paper so that the air is forced up through the grain instead of leaking out at the bottom of the bin. With this type of installation a very large fan and furnace will be required. The fan should be capable of delivering five to ten cubic feet of air per minute per bushel of grain in the bin against a static pressure of two inches of water. A fan delivering 5,000 cubic feet per minute against this pressure will require three to five horsepower. A furnace capable of supplying sufficient heat in this case would have to burn five to six gallons of oil per hour.

When heated air is blown through grain a foot or more thick, the grain with which the air comes in contact first will be dried considerably more than that which is furthest from the entering air. Where the grain is several feet thick, moisture will be picked up from the grain in the bottom of the bin and deposited in the top layer at the beginning of the drying process. By the time the average moisture content of the grain is down to say 14 per cent, that at the bottom of the bin may be as low as eight per cent while the grain at the top is still at 20 per cent moisture content. The moisture content may be equalized considerably by a few hours of power ventilation with unheated air or by mixing the grain.

The capacity of many fans is reduced because the outlet ducts from them are too small. Ducts should have a cross-sectional area of about one-quarter foot for each thousand cubic feet of air delivered.

Plans and instructions for building such a dryer may be obtained free from the Agricultural Engineering Department, University of Saskatchewan, Saskatoon, Sask., or the Dominion Experimental Station, Scott, Sask.

Fencing Famine?

THE shortages of metals which are developing on account of the American rearmament program has raised the question of a possible shortage of fencing wire. It is not so much a matter of steel shortage, although that may conceivably give trouble later on. At the moment there is a scramble for zinc, used in the galvanizing process.

The Country Guide asked C. C. Morin, of the Frost Wire Fence Co., one of the leaders in the industry in Canada, if the situation might lead to an early curtailment in supplies.

He replies that while the Americans have been stock-piling, some producers have been requested to divert zinc to the U.K. At the moment Canadian purchasers are on a substantial quota, and even though some American galvanizing plants have cut operations, farm fencing supplies seem to be secure as far as may be judged at this uncertain moment.

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ANNUAL MEETING

THE ROYAL BANK OF CANADA

Voluntary Curb on Spending Would Speed Re-armament and Preserve our Free Economy

Physical controls useful but no substitute for a real attack on inflation. Non-military expenditures must be cut. President proposes four point anti-inflation programme

How the inflationary spiral can undermine the very basis of free Canadian democracy and the positive steps which should be taken now to meet this threat were emphasized by James Muir in his Presidential address at the annual meeting of shareholders of The Royal Bank of Canada.

"We no longer have that excess capacity in capital and manpower that made possible more guns and more butter in the early years of the last struggle.

"The additional demand upon our economy arising out of rearmament must be met by cutting back our normal peacetime demand for capital and consumption goods.

"What part of peacetime demand can most economically be sacrificed to the needs of defence?

"There are broadly three areas of demand in which cut-backs might conceivably be made. They are (1) the demand by consumers, especially for durable goods; (2) the demand by business for materials needed in the expansion of plant and equipment; and (3) the demand by government for non-military goods and services.

TO FIGHT INFLATION

"Physical controls are not, properly speaking, deflationary at all. From bitter experience after the last war, we know that physical controls conceal but do not directly reduce inflationary pressure. They attack the symptoms and leave the disease itself unchecked. Their proper use is to divert demand from scarce to relatively less scarce goods and services; or, in some cases, to provide a stop-gap until fiscal and monetary policy can reduce inflationary pressure through direct action. Physical controls have their use, especially in total war, but they are no substitute for devices that really attack inflation.

"The suggestions made in this appraisal of ways to fight inflation would, I think, be broadly acceptable to a majority of citizens, whether inside or outside the government. I would summarize them as follows:

- 1) Voluntary saving through the patriotic restraint of consumption should be encouraged, by the precept and example of government, business, and private citizens; i.e., through less non-military expenditure by government, less capital expansion by business, and less consumption (especially on credit) on the part of private citizens.
- 2) Voluntary saving should be encouraged, borrowing discouraged, and fiscal policy made effective by allowing a continued movement towards higher interest rates.
- 3) Taxes required to prevent inflation should penalize consumption and reward saving, whether through direct taxes on consumption or through income taxes that exempt to some degree the *bona fide* saving of the public.
- 4) Direct controls, especially in the form of price control and rationing, should be measures of the last resort, and should be treated as stop-gap devices, not as substitutes for a true anti-inflationary policy.

"At this stage, the most important weapon in the whole arsenal of war controls is the control of ordinary government expenditure."

INCOME TAXES

The most powerful weapon in the fight against inflation is generally supposed to be a stiff increase in the income tax. But the test of efficiency must be that any income tax increases shall penalize spending and reward saving.

Such a criterion would rule out drastic increases in corporate taxes, especially excess profits taxes, tend to encourage waste in management; and, in addition, excess profits taxes are arbitrary in their impact and inflationary in their final effect.

The personal income tax is itself a blunt instrument that may hit spenders and savers alike; nevertheless it may prove to be the only weapon with sufficient power to check spending, even though in the process some saving is hit as well.

To minimize these faults, and to ensure fairness, I would suggest that any increase in income tax burdens should recognize: (1) that an effective attack upon inflationary spending can only be made by broadening the tax base through lower personal exemptions; (2) that equity demands the vigorous reduction of income tax evasion, now all too apparent outside the fixed wage and salary group; (3) that equity and efficiency alike demand the exemption from income tax, wherever possible, of the *bona fide* saving of the public. In its simplest form, this might include the limited exemption of insurance premiums and of net purchases of savings bonds over the year.

ASSETS AT PEAK

T. H. Atkinson, General Manager, in reviewing the bank's 1950 Annual Report, stated that total assets of The Royal Bank of Canada now exceeded \$2,497,000,000, the highest point in the field of Canadian banking. Deposits had also increased materially to reach \$2,337,503,468, the highest point in the history of the bank.

There had also been a gratifying increase in the number of the bank's depositors, the actual number of accounts being over 2,000,000, practically 1,900,000 of which were in Canada. "Since January 1, 1945, the number of accounts on our books in Canada has increased by about 600,000, or 46%," said Mr. Atkinson.

TRIBUTE TO STAFF

"The gratifying figures we have before us today are due to a very large degree to the efficiency, enthusiasm, and aggressiveness of the members of the staff from junior clerk up, and it is fitting that I should say to them a formal but very sincere 'thanks' for a job well done.

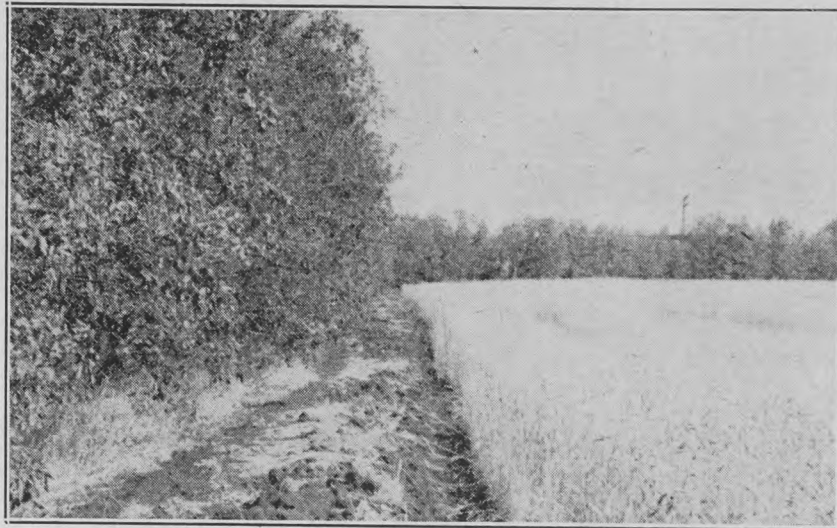
"In the ordinary day-to-day business of the bank, our staff continued the happy tradition of friendliness always associated with The Royal Bank of Canada.

"For their friendly conduct of business as well as for their readiness to rise and meet emergencies, I express the thanks of management to our almost 12,000 staff members and as well to those other employees of the bank who contribute so much to the efficiency of the organization.

"I can assure the Directors and shareholders that morale is high, and that whatever new crises come upon us in the now-opening year, your staff will measure up."

Shelterbelt Value Proved

Shelterbelt value on Drumheller farm found appreciable by Lethbridge Station tests



The cultivated strip next to the shelterbelt is maintained on the Craig Pierce farm, Drumheller.

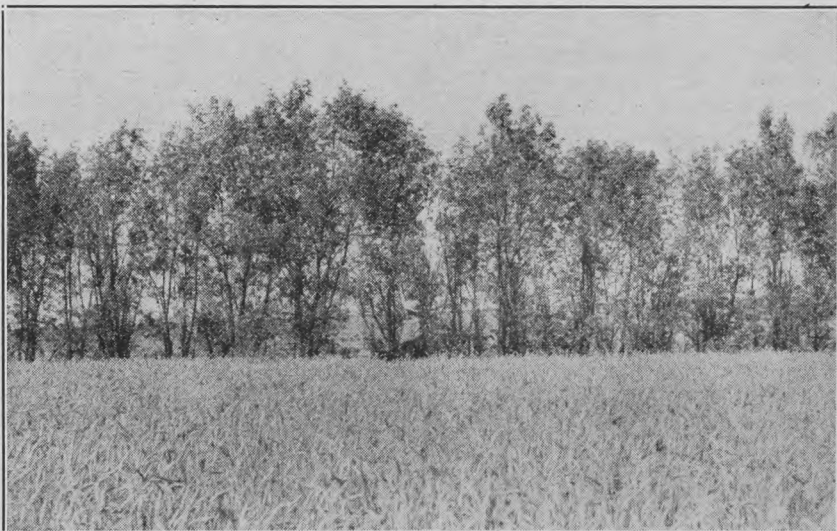
THREE or four years ago a representative of The Country Guide noticed a striking field shelterbelt arrangement about 12 miles southwest of Drumheller, on the Calgary-Drumheller highway. He stopped, took a picture or two, looked up the owner, and found that he was Craig Pierce, and that the shelterbelts were planted over approximately one section of land. Mr. Pierce, at that time, had no closely checked figures to indicate the value of the shelterbelts and their effect on crop yields. However, there has recently come to hand a report prepared by A. D. Smith, supervisor of substations at the Experimental Station, Lethbridge, of one year's work on the effect of shelterbelts on crop yields on Mr. Pierce's farm.

One half-section is surrounded by a shelterbelt of two to four rows of trees, which are about 20 feet high. This half is divided into eight strips, 20 rods wide, by seven mile-long, single rows of caragana, running east and west. Nearly all of another half-section is divided into 20-rod strips by single-row caragana shelterbelts. These belts are planted east and west at right angles to the north or south prevailing winds.

In the fall of 1949, at the request of Mr. Pierce, the Experimental Station at Lethbridge undertook to check the benefits or otherwise of the shelterbelts. Just prior to harvesting operations, square yard samples were taken from the grain on some of the strips, at different distances from the north

shelterbelt of the sample strips. Similarly, the height of the grain at different distances from the north shelterbelt was also recorded. The north shelterbelt of four rows of American ash, about 20 feet high, is about 17 feet wide. The height of the grain at 30 to 90 feet away was 38 inches; 36 inches at 120 feet; 35 inches at 150 to 180 feet; and 33 inches at 210 to 270 feet. Yields calculated from the square yard samples were 57 bushels per acre at 30 feet; 55.8 bushels at 70 feet; and 36.6 bushels at 185 feet. Yield and height of the grain reduced considerably when more than 10 rods away from the shelterbelt, increasing again close to the south shelterbelt of the strip. Yields here were not taken, but the increase appeared to extend not more than 40 feet from the south shelterbelt. Mr. Smith comments: "More snow was held for a greater distance out from the north shelterbelt because it is higher and is on the windward side of the strip; while the south shelterbelt, only about eight to nine feet high, could hold less snow on the leeward side."

THE fifth strip south was protected by a shelterbelt on the north, which was not so high as the one on the outside of the half-section. Its effect on the crop, therefore, did not extend so far out, and yields at 20 feet were calculated at 50.8 bushels per acre and, at 100 feet, at 35.3 bushels. The increase was



The north shelterbelt, shown above, is 20 feet high and 17 feet wide. The wheat in the foreground yielded 55 bushels 70 feet from the trees, and 36 bushels 185 feet away.

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decidedly noticeable for a distance of about 70 feet.

A field of oats, protected by one row of caraganas about seven feet high, yielded about 90 bushels per acre, based on square yard samples for a distance of 70 to 80 feet from the north shelterbelt, but the remaining area was late, ripened unevenly and was harvested for green feed. Due to lack of moisture away from the trees at seeding time, this outer crop was sprayed late (early July) because dry conditions prevented early germination of the grain and weed seed away from the trees. No spraying was necessary in the crop near the trees, because it had a better start and smothered the weeds.

Each shelterbelt is provided with a cultivated strip the width of the one-way. Weeds are, therefore, kept down on the edges of the cropped strips. Mr. Smith calculated that a single row of caragana uses up about three feet of land at the base. This, plus eight feet for cultivation, means approximately two and one-half acres devoted to shelterbelts in a 40-acre strip, and therefore unavailable for cropping. This amounts to 6.2 per cent of the area, so that the yield on the remaining 37.5 acres would have to be increased by no more than 6.2 per cent, to compensate for the land used by the shelterbelt.

Mr. Pierce is of the opinion that, over a period of years, yields from the strip next to the highest shelterbelt are higher than from the other strips, the higher shelterbelt retarding the movement of air over the crop, and in his judgment, cutting down the rate of evaporation during the growing season.

The general conclusions reached by Mr. Smith were: (1) That the shelterbelt did not decrease yield, but increased it, and that the size of area where yields were increased depended on the height of the shelterbelt on the windward side of the strip; (2) from general observation, the crops in the shelterbelt area appeared to germinate more evenly and would yield over 30 per cent more grain than the crops outside the shelterbelt area, though no attempt was made to make a comparison between yields inside or outside the shelterbelt area, by any system of measurement.

Kill Poison Plants

IT is estimated that 500,000 U.S. people are blistered during the vacation season each year by three poisonous plants: poison ivy, poison oak and poison sumac. These plants are found in profusion, and for years various chemicals have been used in an endeavor to exterminate them, including powdered borax, carbon disulphide, coal tar and petroleum oils, sodium chlorate, sodium arsenate and ammonium thiocyanate. In recent years, 2,4-D and more recently 2,4-5-T have been available, as well as ammonium sulfamate, which is said to be perhaps the most effective weapon yet against poison ivy. This chemical, sold under the trade name Ammate, begins to wilt the leaves inside 24 hours and will kill the entire rootstock if properly applied. Ammate kills any plant it actually touches. The poisonous agent in all three plants is a substance known as urushiol, causing a form of allergy on the skin. It is believed no person is completely immune.

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Dangerous Dan

Continued from page 12

somebody else to drive us to school."

Dan gritted his teeth and pulled the truck viciously around a hairpin turn.

Billy rushed on, his voice becoming tearfully urgent. "And Dad told me that they talked about it at the meeting last night and that Mr. Blakey said he would be glad to drive us to school in the station wagon if the manager would give him time off. But we don't want to go with Mr. Blakey, Dan, we want to go with you. So we thought that maybe . . . maybe if you were to say hello to Miss Stephens and . . . tell her . . ."

"I'll tell her, Bucko," said Dan grimly. "I'll tell her!"

JANET STEPHENS, the new school teacher, saw the cloud of dust over the crest of the hill before the truck itself appeared. He's driving even faster than usual, she thought, and made a mental note to speak to the mine manager about Mr. Blakey.

Janet had nothing against Dan Mulvaney. The children liked him, and that was good enough for her. But, after all, she was responsible for them until they got safely home . . . and she remembered very clearly what the psychology professor had said about "fairy" stories. She sighed, momentarily weighed down by the problems of her first school.

She picked up a piece of chalk and started to put number work for grade one on the blackboard. The children were under instructions to stay out in the playground until the bell rang, and so, when she heard the footsteps, she said, "put your things in your desk and go out and play. It's only five minutes to nine."

It must be one of the children from the mine, she thought. She'd heard the truck stop outside.

There was silence, and no retreating footsteps.

"Well?" she said, still intent on her work.

"Good morning," Dan said beligerently. He was only a few feet away from her, hat on the back of his head and feet spread well apart.

Janet turned so quickly the chalk broke in her hand. Part of it rolled under one of the desks. Dan stood perfectly still for a fraction of a second, staring at her. Then, awkwardly, he took off his hat, retrieved the chalk and returned it to her.

"Thank you," she said politely. She had to look up to meet his eyes even though she was standing on the platform.

"I'm Dan Mulvaney," he said, the gruffness gone from his voice.

"Yes, I know. I'm Janet Stephens."

"How do you do." He thought she'd be—well, older. She was young and, yes, kinda pretty. Dan wished he was back in the truck.

"Did you want to see me?" she asked. She had large, blue eyes, Dan noticed, and her hair was the color of the yellow birch.

"Well, yes, I did." Dan began valiantly.

She was looking up at him, smiling helpfully.

"I thought that . . . well, I thought that as I drive the mine kids to school every day . . ."

"Yes?"

"I thought it was . . ." he swallowed, "time I came in and introduced myself."

"That was very nice of you. I'm very pleased to meet you Mr. Mulvaney. I've heard a lot about you—from the children."

That reminded him, and he tried again. "And I wanted to talk to you about something, Miss Stephens," he began.

He'd probably have told her too, if her eyes hadn't been so blue.

"Yes?" she asked.

"Well, the kids were telling me . . . And it was at this point that he finally



"You'd think he could break away from the old grind for just once in his life."

faltered. "I heard you might like to go to the dance at the mine next Saturday," he blurted out in a rush.

"Well, I was thinking about it," she replied. "Mr. Blakey said that he might be coming down with the station wagon that afternoon, and . . ."

"Oh, that's fine—that's great," Dan said quickly, barely concealing his relief. "I wouldn't want to cut in on . . ."

"Oh, you wouldn't be cutting in," she assured him.

"But if Carl Blakey has already asked?"

"Oh, no, he hasn't really asked. You see, it wasn't definite at all."

"I see," Dan said, backing up slightly to the aisle.

She stepped off the platform and came up to him. "And I really would like to go, Mr. Mulvaney," she said.

"I've only got the truck," Dan said desperately.

"Yes, I know I've heard about the truck from the children. They tell me it's quite a thrill to ride with you."

"Well, I don't know about that . . ."

Defeated, he started to retreat. "What time will you call? I'm staying at the Wilkinsons', you know—down on the river road."

"I'll be there about eight," he told her, the truck and safety in view through the door.

"Goodbye, and thank you, very much," Janet said.

He didn't exactly run, but he got to the truck without wasting time. Billy had seen him and was there before he started off.

"Did you fix it up, Dan?" he asked anxiously.

"I fixed it up all right," Dan growled, starting the engine with a roar. "I fixed it up proper."

Billy got out of the way just in time.

That was Wednesday, and by Saturday everyone in camp knew about Dan's date. It was the first time he'd ever actually "asked" a girl to one of the mine dances, and significance was attached to it.

Dan heard some of the talk. He grinned at the sly jokes and evaded the leading questions. Inwardly he cursed himself bitterly. He wished he could break a leg.

The kids noticed the change in him right away. They missed the singing and the war-whoops, and two of them almost missed the bus on Friday.

Billy said nothing about Dan's meeting with Miss Stephens, though he sensed this was at the root of Dan's silence. Dan himself was conscious that the subject was being avoided, and it bothered him.

"That was a good idea of yours, Bucko," he said, on the way home, Friday afternoon. "Taking Miss Stephens to the dance. I thought it over and figured maybe I should get to know her better first. I'll speak to her about the truck tomorrow night."

Billy brightened up immediately. "I sure wish you would, Dan," he said.

"You can trust me, Bucko," Dan assured him. And right away he felt better. He hadn't botched it up after all. He'd give the school m'arm a good time, get on friendly terms, then talk to her. And he'd drive very carefully that night.

HE felt even more determined about it on Saturday morning. After his first trip he went up to the office to get his pay cheque. Carl Blakey was sitting at the desk.

Dan had no enemies he could think of, but he'd never really hit it off with Carl. Carl had led the hymn singing in the mess house on Sunday nights, taught Sunday school and organized concerts. There wasn't anything wrong with a fellow doing these things, of

course. It was just that—well, he was too smooth for Dan's liking.

"I hear you're taking Miss Stephens to the dance tonight?" Carl said, feigning a smile.

"Yep," Dan answered, signing the pay sheet.

"That's very nice," Carl continued casually. "Although I must admit I'm a bit surprised. I had rather imagined that you'd be quite annoyed with her."

"Why?"

"Well, after what she said about you driving the children to school." If Carl expected a reaction, he was disappointed. "Of course, you know that I'll be taking them in the station wagon after the end of next week," he added smugly.

Later he spoke to the manager about it.

"It's quite true, Dan," the manager told him. "I'm sorry, but I can't do anything about it. The chairman of the school board wrote to me, and Miss Stephens herself 'phoned on Wednesday."

"Wednesday?" Dan repeated.

"Yes, Wednesday night. She said that while she personally liked you, she felt that you were hardly the right sort of person to be in charge of young children. Said something about your stories."

"Corrupting young minds, I suppose?"

"Yes, something like that. She said you didn't realize the damage you might be doing, filling them with ideas of wild Indians behind every tree, and rustlers, and such."

"Okay, so Carl's going to take them and sing hymns?"

THE manager laughed. "I wouldn't put it past him," he said. But, seriously, Dan, I've got to go through with it. It'll take a week to switch the office routine, though." He put his hand on Dan's shoulder. "Of course I don't believe what Miss Stephens said about your driving. That's a lot of hooley. That truck may not be a luxury wagon, but it's as safe as a church with you behind the wheel."

"Thanks for that, anyway," said Dan.

"Sure. Everybody knows you're the best driver we ever had. It's just that Miss Stephens hasn't been around long enough. But she's talked the school board into it. It wasn't their idea."

Dan started to go.

"Hear you're taking her to the dance?" the manager said.

"You heard right," replied Dan, putting on his hat.

The manager scratched his chin thoughtfully. "You couldn't . . . ah . . . talk it over with her sometime tonight?" he suggested casually.

"I aim to do just that," Dan replied.

He called for her promptly at eight. They didn't talk much for the first little while. She said something about it being a beautiful night, and Dan agreed with her. He asked her if she was warm enough with the window open, and she said she was.

Dan was concentrating on the road as he'd never done in the past. There was really no need because he knew every rut, pot hole and boulder and he could have rounded any corner with his eyes shut. But, somehow, driving at a steady 20 miles an hour made it seem very difficult.

After a while, Janet started talking. She told him about her folks in the city, about how this was her first school and how very much she wanted to be a good teacher. Then she told him about some of her pupils and the amusing things they said.

Dan liked the sound of her voice, and the way she laughed. He said the right things to show he was interested. When she stopped he started to hum to fill in the silence.

Janet began fitting the words to the tune with a very good soprano. Pretty soon they were singing one song after another, taking turns at the harmony. Dan relaxed, and speeded up—just a little.

They were having such a good time he almost forgot to turn off to the mess house.

"I sure like singing," Dan said, as he parked the truck.

"So do I," she said. "And you have a very good voice, Mr. Mulvaney."

It wasn't the compliment so much as the way she said it that made him feel so happy.

INSIDE, they were immediately surrounded by most of the unattached men, some of whom had met Janet and others who hadn't but wanted to as soon as they saw her.

The competition was keen most of the evening. Dan did well enough, but he got pretty sore at Carl Blakey for trying to cut in every time he danced with Janet.

He didn't mention the truck, or the kids, all during the evening. First, because he was having a good time and didn't want to spoil it. And secondly, because he'd decided to

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tackle the subject on the way home.

They started singing again as soon as they got in the truck.

Then Janet said she was cold, and so, quite naturally, Dan felt he ought to put his arm around her. She didn't come any closer, but she didn't pull away either.

"You're driving very fast, aren't you?" she said, as he rounded a bend with his left hand.

He'd forgotten about his speed limit. But, somehow, now it didn't seem to matter.

"Oh, I know this road pretty well," he said casually. He wasn't going to miss this opening. "Been driving this road for two years now, and never had an accident."

"There's always a first time for everything," she observed with equal significance.

Whether it was that, which sounded like an invitation, whether it was the night air, or whether it was merely part of his plan of attack, Dan wouldn't have known. In any case, at this point it seemed quite a logical and pleasant idea to kiss her. And strangely enough, he went about it very calmly and deliberately.

They were at the foot of the big hill, travelling along a fairly level stretch. It was a fortunate choice of location at any rate, as Dan had reason to recall later.

Janet let her right arm describe a wide arc before her open palm connected squarely with Dan's chin. It didn't knock him out, of course, but the suddenness of it had almost the same effect.

Before he'd recovered, he, the truck and Janet, were upside down in the ditch.

"And you call yourself a good driver!" Those were her first unfriendly words as she disentangled herself from Dan's arms. He'd put them fully around her for protection in the last second.

He'd got a bump on his head from the windshield for his pains, but it wasn't that that made him feel sick. It was the realization that he'd lost his fight for the kids. And very definitely and finally, he'd lost Janet Stephens. He didn't know which upset him most.

It was only a few minutes later that Carl Blakey came slowly down the hill in the station wagon, taking some of the dancers back to the village.

"Are you sure you're all right, Janet?" he kept repeating as he ushered her to the car.

"Really, I'm quite all right. It was nothing at all," Janet said, freeing herself from Carl's oversolicitous arm. But Dan knew her anger was directed at him.

Carl had a wicked gleam of triumph in his eyes. "I'll pick you up on the way back—in an hour or so," he said heartlessly. Then, as a parting shot, "Well, I guess that's that!"

That, reflected Dan sadly, was for sure.

CARL took the kids to school in the station wagon on Monday morning.

"Couldn't do much about it Dan," the manager explained. Miss Stephens 'phoned on Sunday morning and told me about your—er—accident." That was the only mention he made of the truck going in the ditch, although Carl had spread the news around camp and they'd had to get a tractor to pull it out.

"She seemed pretty mad about something," the manager continued. Then, sympathetically, "trouble with you, Dan, you haven't got the right technique."

"Yes, I guess so," Dan agreed glumly.

And he was glum for a long time. It wasn't his reputation as a driver he was concerned about now. Nor was it the kids—though he missed them. It was Janet. He tried not to think about her, but without much success.

The change in the transport had an adverse effect on the morale of the children. Their former eagerness to get away to school was replaced by reluctance and bad temper. Parents had to cajole and argue and even resort to punishment to get their offspring out of bed, breakfasted and aboard the station wagon on time.

Dan heard about it, but it gave him little comfort.

One morning Billy Svenson flagged him down.

"Can I go with you, Dan?" he asked cheerfully. "Mr. Blakey went without me this morning."

Dan smiled understandingly. "Well, I dunno, Bucko. It's against the rules. What would your folks say?"

"Oh, they told me to come out and wait for you." In confirmation, Mrs. Svenson came out the front door and waved.

"Okay, hop in, young fella," Dan said.

"Miss Stephens was asking about you," Billy said, as they started off.

"Oh, was she now?" He tried to make it sound casual.

"Yes. She said she hadn't seen you at the last dance and she wondered if you were sick or something."

Dan's heart skipped a beat. "Well that was mighty kind of her," he said. Carl Blakey had taken her and he'd stayed away on purpose that night.

"She said you had a good voice," Billy went on.

"Yes, I've heard that before," Dan replied grimly.

"But she did, Dan. It was during our singing lesson. She said we mine kids could all carry a tune very well and she supposed it was because we sang so much with you. She said that was one good thing you taught us."

"Condescending of her," said Dan.

"We told her we learnt a lot of things from you. All about horses, and hunting, and Indians, and stuff. And she said, well, we certainly seemed to come to school in a better mood when we came with you. She supposed it was because of all the fresh air we got."

Dan silently cursed all school teachers, especially young ones.

"And we told her we didn't like coming in the station wagon because Mr. Blakey talked all the time about what we were studying in school, and that made it seem like we'd already been to school before we came." The prospect of double lessons all through the winter was more than he could bear. He lapsed into a gloomy silence.

A little while later he reverted to the subject of Miss Stephens. "I don't think she likes Mr. Blakey very much."

Again Dan's heart skipped. "What makes you say that, Bucko?"

"Oh, I dunno. Just the way she looks at him and talks to him. And she said she couldn't go to the dance with him when he asked her yesterday. She said she had a lot of papers to mark."

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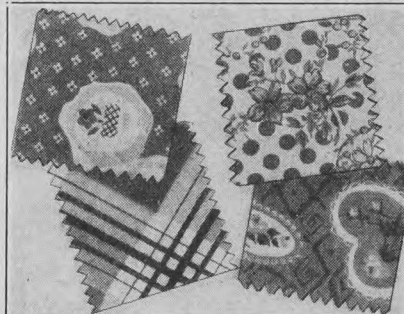
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Dan started singing after that, and Billy joined in on the choruses. The bell had rung when they got to the school, or he might even have gone inside. That's how he was feeling.

But somehow he never did work up enough courage to stop at the school-house. Janet wasn't at the dance on Saturday, although he'd gone in the hope that she'd changed her mind. She did go on the following week—with the Wilkinsons, but Dan was on an overnight trucking job down the valley. A couple of the fellows said she'd asked about him. But they also said she danced a lot with Carl Blakey.

THE snow came early that year—and with a vengeance. It snowed all one week end, and on Monday morning Dan had to clear a track for Carl to follow in the station wagon. He got the kids to school all right, but only after Dan had pulled him out of a couple of snowdrifts. The kids were almost an hour late.

It kept snowing all morning and on his second trip down to the station, he hung around and waited for Carl to show up.

There was no sign of him by three-thirty, and he'd just about made up his mind to collect the kids himself when he heard the school bell ringing. The snow had stopped momentarily and the sound carried clearly down to the station. The insistent ringing spelled urgency.

Dan climbed into the truck and headed for the school.

Three of the mine kids were out on the road when he drew up. They had the bell with them. They'd been taking turns, ringing it for all they were worth.

"Billy's sick!" they yelled at him. "He's awfully sick, Dan. Vomitting and everything. Miss Stephens said to ring the bell and perhaps somebody'd come."

He hurried inside. Billy was lying on the top of Janet's desk. She had covered him with her coat.

She looked up and Dan saw the relief in her eyes. "It's serious, Dan, I think," she whispered. "I think it's appendicitis. It came on suddenly, just about two-thirty—but I think he must have had a pain before that. I thought Carl would be here before now and we could rush him to the doctor at the mine."

Carl's in a snowbank," Dan said. Then he bent over the boy. "Hiya, Bucko!" he said jovially, gently roughing Billy's curls. "Got a bellyache?"

"Sure have, Dan." Billy wiped the tears from his face and tried to smile.

"We'll have you home in no time, fella" Dan said. "You warm enough?"

"I'm okay, Dan. But I'm sure glad you're here."

Without a word to Janet, Dan picked up the boy gently in his arms. Then he turned to her. "Get the other kids to go to the station and tell them to wait for Carl there. If he doesn't show up, the agent'll look after them. You better come with me in the truck. Bring all the coats you can spare."

Then he was outside, carrying his burden as though it were a feather.

Janet wasted no time. She told the three children what to do, locked the school door after them, and joined Dan in the cab. Billy was lying on the seat, Dan's heavy coat underneath him. She put hers over him and pilloled his head on her lap.

The boy didn't say anything, but

there were fresh tears on his cheek and his hands were tightly clenched.

Dan shifted into gear and wheeled the truck onto the road. Gradually he built up the speed to thirty-five and held it there. It was snowing again and his earlier tracks were almost covered.

He glanced at Billy and smiled reassuringly. "Ever tell you about the time I was trapping up in the hills and got my foot caught in a bear trap?" he said cheerfully.

"No. Tell me about it Dan."

Dan looked quickly at Janet, but she was watching the road.

"Well," he began. "It was back in the winter of thirty-eight. That was a bad winter, that was. Lots of snow—twenty feet, some places in the hills. And cold! Why, if you spat, you'd have an icicle from your mouth to the ground!"

Billy smiled in appreciation.

"I was out by myself, way up back of Grizzly Mountain. Thought I'd see if I could catch one of those big brown bears in a trap I'd made by myself. It was an extra big trap, large enough to catch an elephant. . . ."

The windshield wiper was clogged with snow and Dan reached out through the window to clear it.

"... But nice and gentle too. Spring the trap, and she'd close fast but without so much as scratching a bear's paw. You see, I wanted to get one of those brownies for a pet. See if I could tame him."

"Well, I was roaming around looking for a place to set this trap when all of a sudden I came upon the biggest bear tracks I'd ever seen. I said to myself, 'That's for me,' and I set the trap right there in the snow, along the side of a cliff. The tracks were fresh and I figured that old Teddy would have to come back the way he'd gone."

"Why wasn't he hibernating, Dan?" Billy asked. "I thought all bears hibernated in the winter."

Dan paused for only a fraction of a second. Time enough to see the smile on Janet's face.

"So they do, Bucko. At least all the bears I've ever known. But you see, I'd planned to set the trap near a cave or an old log where a bear might be sleeping. Then I'd wake him up and coax him out. But when I saw these big tracks, I figured this fella just wasn't very sleepy that winter. . . ."

THEY were going over the narrow stretch above the lake, and it was getting dark. The headlights shining on the falling snow made the road almost indiscernible, but Dan didn't diminish speed. He stuck his head out the window occasionally to get his bearings, but apart from that, he seemed to be driving by instinct.

"Well, what happened then, Dan? Did he come back?"

"He sure did," Dan replied. "But I didn't figure I'd be in the predicament I was when he did show up. You see, when I was tying the trap to an old tree, I accidentally slipped. Presto, the trap banged shut and I was caught."

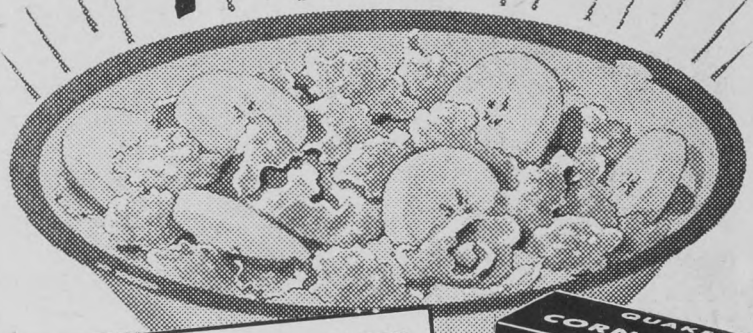
"Now, the trouble was, I hadn't worked out a way of getting out of that trap without using a special key I'd left at home. So there I was, caught in my own bear trap, miles from nowhere up on the side of Grizzly Mountain. And it was thirty below zero!"

"Gosh!" exclaimed Billy. Janet was



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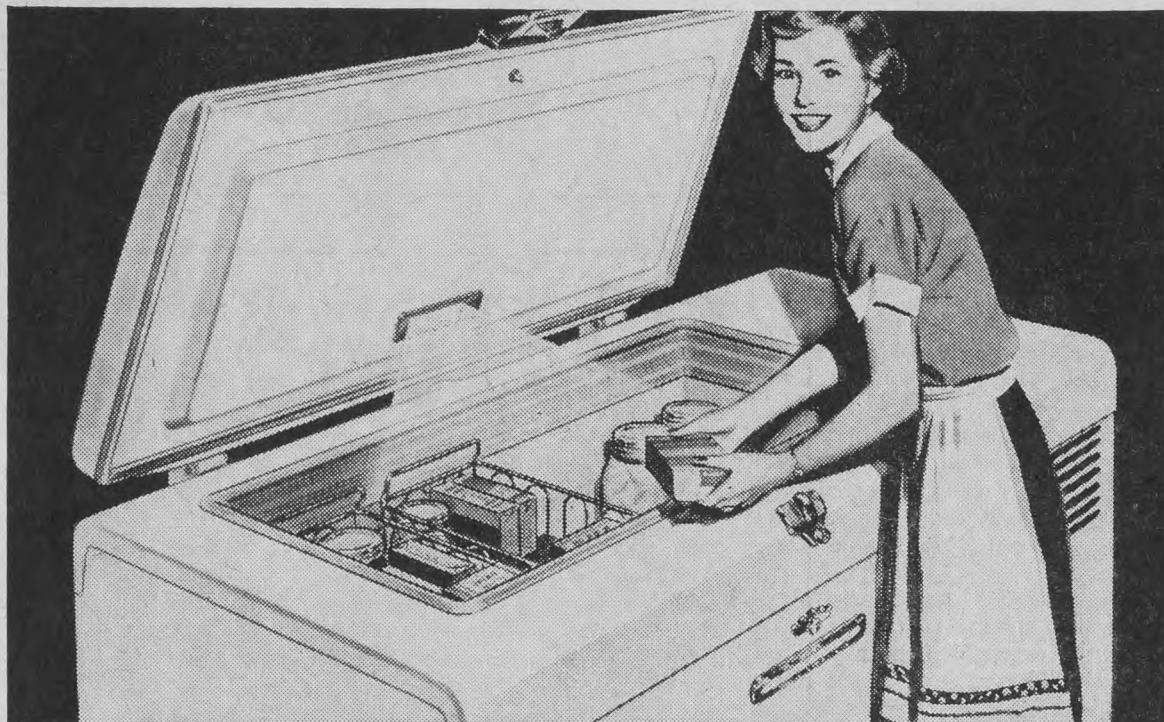
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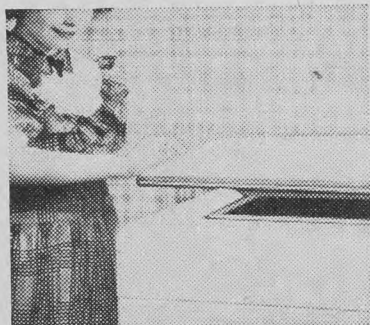
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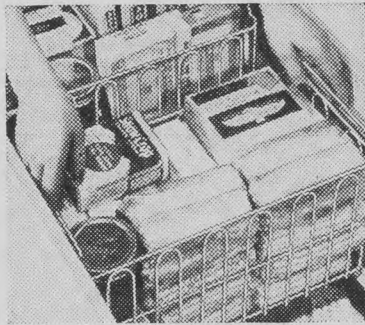
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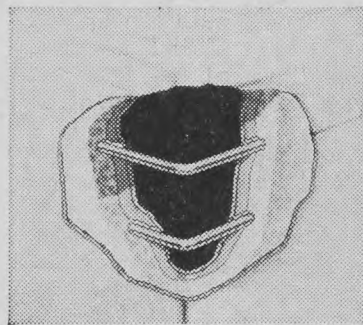
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looking at Dan as though she was seeing him for the first time.

"Well, I was sitting there in the snow feeling sorry for myself when all of a sudden I felt somebody breathing down the back of my neck. I looked around, and there, as big as life, was the biggest and ugliest looking grizzly I'd ever seen! He was just standing there, looking at me curious-like."

"What did you do?"

"You'd hardly believe it, Bucko, but my gun was out of reach so . . . Hold it, there's something ahead!"

Fifty feet ahead, and hardly visible through the snow, was the station wagon. It was on the left side of the road, deep in a snowbank. Carl Blakey was in the middle of the road, jumping up and down, and waving his hands wildly.

"Can't stop now, Carl," Dan said, shifting into gear. "Billy's sick and we've got to get him to the doctor right away. I'll be back later." The truck started moving.

CARL hung on to the side of the cab. "You can't leave me like this!" he said, his voice almost breaking. "Besides, you can't get past. There isn't enough room. You'll go over the cliff."

"I'll get by. Now get out of the way!"

Carl looked pleadingly at Janet. Dan reached far out, grabbed Carl's coat near the neck with his left hand, and pushed. The timekeeper fell out of sight into the snow.

Dan drove the truck ahead slowly. Then, measuring the distance between the station wagon and the cliff, he stepped on the gas. He felt the rear wheel sink into the soft snow on the outer edge of the road. The truck lurched to the right. He pulled sharply to the left, put his foot to the floorboard—and they were in the clear.

Janet reached over and put her hand gently on Dan's arm. He grinned at her sheepishly.

"Well, as I was saying, there I was—helpless. The bear stared at me and I stared at the bear. I figured the only thing to do. . . ." The story went on, building up to the miraculous climax. Billy listened, but Dan could see that he was fighting to concentrate.

The heroic struggle against inscapable odds continued until they reached the camp when the bear had freed Dan from the trap and they had become bosom pals. Billy was deathly pale and his eyes were tightly closed.

They carried him into the sick bay and someone went for the doctor. He operated almost immediately.

When it was over and Billy was safely asleep, Dan took Janet to the mess house for something to eat. Afterwards, going back to the truck, she reached for his hand.

"Dan," she said, looking into his eyes. "I'm terribly ashamed. I've been so wrong about you. You saved Billy's life tonight, and it took that to make me realize it. I want you to drive my children to school from now on."

Dan smiled and returned the intimate pressure of her hand. "And we're friends, Janet?" he said.

"Yes, Dan, we're friends—real friends." She stood on tiptoe and kissed him.

It was sometime later that they remembered Carl Blakey out in the snowbank.

The Countrywoman



Upper: Group of W.I. members from Ceylon who attended the A.C.W.W. Conference.

Lower: King Frederik IX and Queen Ingrid of Denmark graciously welcomed country women from many lands to Copenhagen.

Hospitality extended by rural women does much to bring about a better understanding between the people of many countries

by AMY J. ROE

tive years. The reports of these country girls after the experience has been instructive both to themselves and their sponsors. It should be noted that the Swiss Country Women's Association has had in the forefront of its activities, for several years, the development of a plan for technical training for farm women. This program is based on the belief that only those who recognize farming as a definite vocation and mode of life will find in it proper satisfaction and remain loyal to the land. The plan includes a definite apprenticeship of work in a farm home, attendance at a domestic college or short courses for at least four months and exchange visits on an international basis. It is considered to be of great importance that young girls get to know conditions and people in other countries.

In many instances the hospitality accorded is on an individual basis. Visitors are received and entertained in private homes and made in every possible way to feel that they are welcomed. An example of this was experienced by the members of the Canadian Women's Institutes party on tour to the Associated Country Women of the World Triennial Conference at Copenhagen last summer. As a member of that party of 23 who arrived at Liverpool on a Friday morning in late August, I am happy to tell how we were made quickly to feel both welcomed and at home among English people.

It was for most of us, our first experience of a trip abroad. We found a group of Liverpool W.I. members waiting on the wharf to welcome us. Each Canadian had received in advance a notice that she was invited to be a guest in some private home in Cheshire over the week end. We gathered at a hotel and soon English women came to take us by car to our hostesses. I was fortunate in being taken to the home of Mr. and Mrs. Duncan McFarlane, a young Scottish couple with two small children, near Hartford. My companion, Anna Templeton of Newfoundland, was nearby at the home of Mr. and Mrs. Tugman.

Our hosts and their friends did their utmost in a gracious manner to make us feel welcomed and at home. We were driven through the pleasant English countryside, over the salt mining area and learned something of its story. We saw evidence of the activity of the great Imperial Chemical Industries at whose "works" most of the local people are employed. We saw large tracts of land planted in thick but orderly fashion to trees in Britain's reforestation scheme.

On Saturday evening, Anna Templeton and I met with the local committee of some 15 women who had been in charge of making arrangements for the Canadian visitors. We met in the home of Mr. and Mrs. Birthistle in a house over 200 years old. The old farmhouse had been remodelled and the room that once had been the kitchen with a huge fireplace and stairway to the floor above was now a most pleasant living room.

We spent the evening chatting about life in Canada and England, comparing the activities of the W.I. at home and there. Hartford has 220 members who meet in interest groups in a church hall. In Cheshire there are 140 W.I. locals with 12,000 members. Drama and song festivals are featured. There are also interest or hobby groups in leathercraft, films, local history, home economics, demonstration courses at agricultural colleges, etc. We were told that their members are definitely concerned with international subjects. A memorial has been founded to Grace Haddow, one of the founders of the English W.I. movement. Each year a sum of £20 each is awarded to two W.I. members to assist them in going abroad. In 1950 a Cheshire woman was selected and went to France.

REFERENCE already has been made, on this page, to the custom now growing among rural women of European countries of extending hospitality to visitors from other lands. It has been stimulated by contacts through the Associated Country Women of the World. Sometimes it is a group movement, where a local or a district organization assists by planning a tour covering certain points of interest; by making reservations for the visitors at some moderately priced, recommended hotel and advising on or even assisting with entertainment features.

Frequently the idea behind it is merely a holiday period or a pleasurable excursion to provide a break from the usual routine or a change of scene. At other times it is tied in with some educational project and may embody a week's course of lectures at some special school or college or a series of visits to industries or institutions.

In Finland the Martha Union has, for some years past, arranged temporary vacation homes where Finnish housewives during the loveliest season of the year may rest and recover their strength. Special care is taken to provide these features for mothers

with many children and others who are strained and in need of repose. In cases where the societies have not been able to arrange vacation homes themselves, bursaries are distributed to deserving mothers and places are procured in suitable homes. During the summer of 1949, some 20 housewives from Sweden were received by the Martha Union and stayed at vacation homes. Last year it was the turn of the hostesses to visit their guests in Sweden. It is reported that the satisfaction and joy at these vacation journeys has been great on both sides.

Each summer The Co-operated Danish Housewives arrange in July a special holiday course at a famous youth college for housewives. The program includes lectures and discussions concerning social life, children and educational topics. There is a program of singing, folk dancing, rest periods and excursions. Women from other Scandinavian countries and northern Germany have been taking part.

From Holland 55 groups of members have exchanged visits with English, Swedish and Swiss rural women. Dutch and English country girls have been enabled to exchange summer work in homes with Swiss girls for several weeks, during consecu-

PURE FOOD

--

SAFE DRUGS



IN the Canada of today the homemaker is able to do her marketing with confidence—confident that the food she buys is pure and the drugs she purchases are safe. It was not always so, however. The adulteration of food began with the introduction of trade and commerce; and adulterated meats, drugs, bread and flour, wine and ale are mentioned frequently throughout history. In both early Rome and Athens wine was adulterated so extensively that even the rich could not obtain natural wines that had not been diluted and artificially colored. Ancient writers tell us that opium was frequently adulterated with gum, and drugs mixed with the juices and leaves of numerous plants.

Drastic punishments were sometimes meted out to dishonest butchers, bakers and brewers in the Middle Ages. There are records of bakers adding a fine, white, sweet-tasting earth to the bread for added weight. Punishment for such an act consisted of lashings or beatings and exposure in the pillory with the faulty loaf strung around the rogue's neck. At other times the sentences were light and the fines small. A wine seller in France was given only one month's imprisonment for adding belladonna to his wine, thus causing the death of at least one person.

IN early Canadian times liquor was so badly adulterated that it had been suggested to the legislature that all liquor be banned from Canada. The legislators modified the suggestion, however, to mean only bad liquor and they passed a bill requiring all brewers and manufacturers of liquor to buy a licence. As the country began to expand and there was a sale for large quantities of food in the camps and new towns in the West, adulteration of food began on a major scale.

The need for government control soon became apparent and Canada's first Food and Drugs Adulteration Act was passed in 1874. Of all the food samples tested that first year, over 51 per cent was adulterated. The list included nine out of ten samples of coffee, four of 20 specimens of tea, 34 of 58 samples of milk and 17 of 19 trial lots of pepper. Within the next seven years, however, adulteration had been cut in half and as legislation strengthened the percentage dropped sharply until at the present time the rate is between one and two per cent.

Most cases of adulteration today are due to ignorance or accident rather than fraud. Most manufacturers are anxious to produce the best product they can. If a mistake is made they are more than willing to co-operate with the authorities and do all in their power to correct the error. A few, however, do take



Retail stores are visited frequently by food and drug inspectors.

How the Canadian public is protected in buying food and drugs by the administrative, laboratory and field work of a special department of government

by LILLIAN VIGRASS

and the authorities were forced to seize between four and five tons of the product.

THE Food and Drug division of the Department of National Health and Welfare is responsible for administering the Food and Drugs Act. Their duty is to see that all food sold in Canada is pure and wholesome and that the drugs may be used

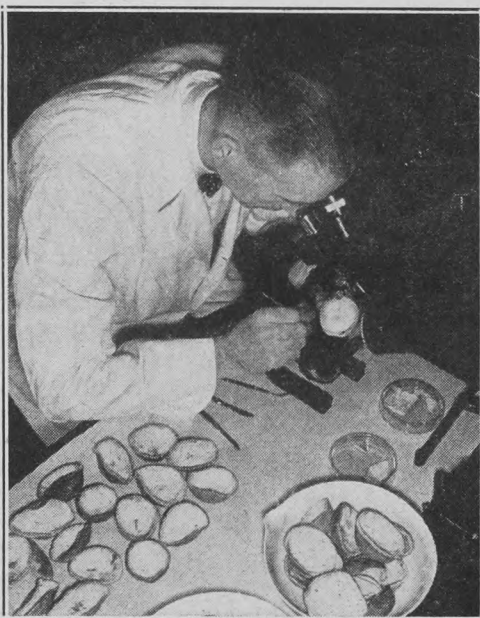
safely for their given purposes. It also administers the Patent Medicine Act which controls the manufacture, licensing, advertising and sale of all so-called secret-formula remedies.

In 1948, the control of the sale of cosmetics, also, was taken over by the Pure Food and Drug administrations. In no way do they endeavor to dispel the idea of secrecy and romance that is associated with the ancient art of

cosmetics, but they do want to protect Canadians against harmful ingredients and from the misleading and grossly exaggerated claims which are made from time to time by a few manufacturers. Such descriptions as "crow's foot" cream, hair "color restorer" and "nourishing" cream are not considered fair or honest. Most cosmetics on the market are, happily, free from harmful ingredients and are reasonably safe for most people if properly used.

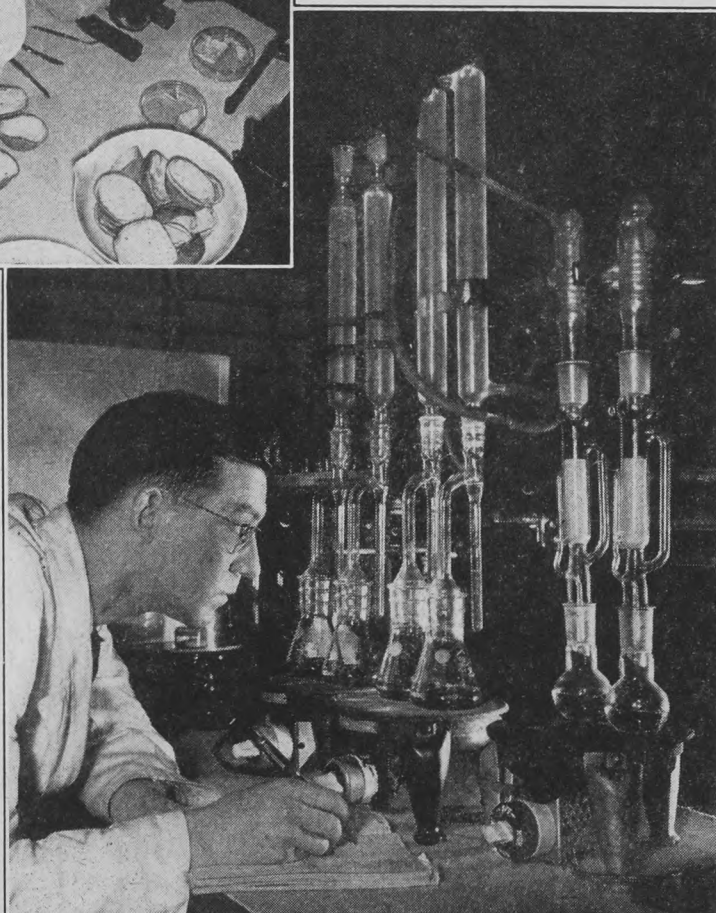
There are five regional offices located across Canada in addition to a headquarters organization at Ottawa. Each regional department consists of a director, several inspectors, a clerical and a laboratory staff. They are located at Winnipeg, Vancouver, Toronto, Montreal and Halifax.

In the laboratory the samples gathered by the inspectors are analyzed. Almost any day one may see a wide range of foods being tested—such as macaroni, rice, baking powder, bread, jam, dried egg, fish, candy, olive oil, etc. One of the foods most frequently analyzed is sausage. This may be because of the large number of small manufacturers making sausage or it may be due to the ease with which the food can be adulterated. Too much cereal, too much water, or the addition of dyes and preservatives are the usual reasons for complaints. Soft drinks, too, receive much atten-



Left: Orange peel is examined before being allowed entry into Canada.

Below: An analysis being made of sausage, one of the worst offenders, for its moisture content.



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grime and dirt.

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cleanser has
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action—



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tion. Saccharine is sometimes used as a sweetening agent in place of sugar and if the processors are careless there may be a sediment left at the bottom of the filled bottles.

The central laboratories at Ottawa devote the greater part of their time to the development of standards and methods, special surveys of food not reported by the inspectors and of fundamental research work. A special staff reviews all advertising that concerns food and drugs for false, exaggerated, misleading and evasive claims. The division must approve all radio "commercials" before they go on the air and they evaluate all printed advertising that appears in Canadian publications.

THE inspectors are stationed in the larger centers throughout Canada. They buy food and drugs from many sources in both urban and rural areas. Samples of questionable products are sent to regional headquarters where they are tested in the laboratories and false, exaggerated, misleading and evasive claims on labels are investigated. Any food which is suspected of being adulterated is seized and held by the inspector. After proper investigation, adulterated and misbranded food is not allowed to go back on the market. Harmful food and drugs are destroyed. Misbranded, but wholesome, food is relabelled by the manufacturer, or, if he refuses to, or cannot change the label to suit the division, the food is donated to charitable institutions.

One of the difficulties that every inspector meets is the difficulty of getting rid of large quantities of undesirable food that has been seized by the division in his area. For instance, it is not easy to give away five tons of pepper to charitable organizations when they hesitate to accept food which has been banned from the market. Or how would one go about destroying 17,000 cases of canned tomato juice which contains steel wool scrapings. The juice is unfit for human consumption, it cannot be reconditioned and so must be destroyed. To burn it is impossible. It cannot be left in the dump where someone could pick it up and use it. In one case it was decided to bury it in a deep pit near the city dump. It took several men a full day to haul the cases from the warehouses in immense trucks and to bury it in the huge pit that had been dug there for the purpose.

To pass inspection, food labels must give certain information—the common name of the article, the name and address of the manufacturer or distributor, the weight of the contents if over two ounces, added preservative or coloring when added and a complete list of ingredients in descending order by weight. For example, if a tinned meat is sold as chicken and veal loaf, not only must the label show the name of the manufacturer and the weight of the product but there must be more chicken than veal in the canned product—otherwise the label must read veal and chicken loaf.

Unless a drug is registered under the Patent Medicine Act the label must show the ordinary name of the drug or the full list of ingredients, the name and address of the manufacturer, the weight of the contents if over two

(Please turn to page 72)

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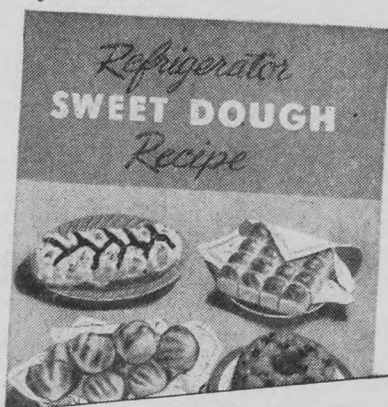


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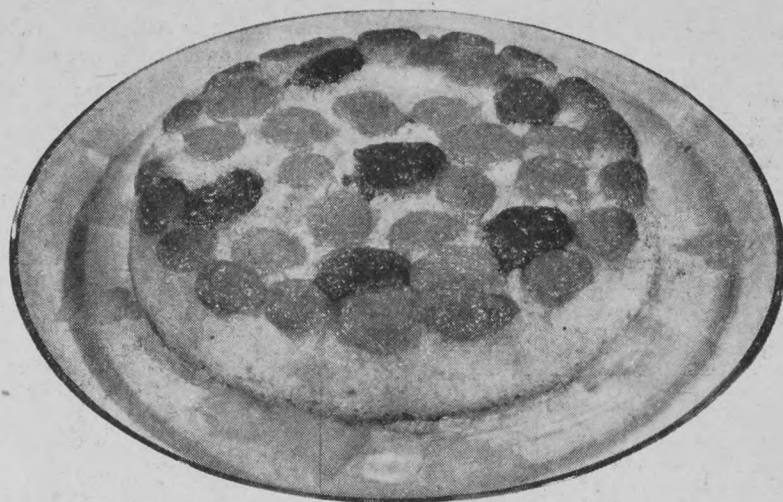
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Apricot upside-down cake makes an attractive dessert for any occasion.

Tasty Apricot Desserts

These delicious dried fruits are a boon to the housewife in preparing late-winter varieties

by EFFIE BUTLER

THOSE packages of golden sun-dried apricots, the aristocrat of dried fruits, are back on the grocers' shelves again. What a boon they are in preparing late-winter desserts when your supply of canned fruits is almost depleted.

Cooking dried fruits by the quick method, which does not entail overnight soaking, gives a stewed fruit superior flavor, texture, and appearance. A modified version of soaking and long, slow simmering may be found beneficial if your packaged fruit is many months old. Best results will be obtained if fruit is first covered with boiling water.

One pound of uncooked dried apricots yields approximately two and a quarter pounds of cooked fruit, a point of economy to remember in the purchase of all dried fruits. Many methods of using apricots in tasty dishes are illustrated in the following recipes.

Stewed Dried Apricots

Rinse apricots in warm water and drain. Cover generously with boiling water and boil from 40 to 50 minutes, depending on the softness of the fruit. Add $\frac{1}{2}$ to $\frac{3}{4}$ cup of sugar for each cup of apricots, depending on taste for sweetness, the last 5 minutes of cooking. Add more water as, and if, needed. Equal parts of prunes and apricots cooked together make a very delicious sauce.

Apricot Upside-Down Cake

3 or 4 T. butter 2 eggs
 $\frac{1}{2}$ c. brown sugar 1 c. apricot juice
Cooked apricot or milk
halves 2 tsp. baking
1 c. sugar powder
 $\frac{1}{2}$ c. butter or 2 c. flour
shortening $\frac{1}{2}$ tsp. salt

Cream butter and brown sugar and spread on the bottom of a round, deep pan. Arrange apricot halves, cut side up, on top of sugar mixture. Set on back of stove while you prepare the batter made from the last seven ingredients. Cream the shortening, add sugar, add beaten eggs and beat up together. Sift flour, baking powder and salt. Add milk or apricot juice alternately with the flour. Mix thoroughly. Pour batter carefully over the fruit in the pan so as not to disturb its pattern. Bake 50 minutes in a moderate oven, 350° F. Turn onto large serving platter. Serve warm with or without cream. Serves 8.

Dried Apricot-Honey Conserve

$\frac{1}{2}$ c. dried $\frac{3}{4}$ c. chopped
apricots walnut meats
2 c. honey

Rinse apricots in hot water. Drain. Place in a bowl or colander and steam over hot water for 15 or 20 minutes. Put apricots through food chopper, using a fine knife. Bring honey to boiling point and remove from heat at once. Add apricots and nuts, and stir to blend. Pour into sterilized glasses and seal. Let stand 4 or 5 days before using. Makes approximately 2 pints.

Apricot Queen of Puddings

Part I	1 tsp. vanilla
1 slice white bread 1 inch thick	Part II
1 egg and 2 egg yolks	1 c. cooked apricots
$\frac{1}{2}$ c. sugar	2 egg whites
$\frac{1}{2}$ c. milk	4 T. sugar
	1 tsp. vanilla
	Dash of salt

Part I—Soak bread in milk. Beat whole egg and 2 egg yolks. Add sugar and beat until light; add to the bread and milk mixture and beat all together until very light. Add vanilla and blend well. Pour into a buttered pudding dish and set in pan of hot water in moderate oven till the custard sets (about 45 minutes). Part II—Mash drained, cooked apricots to a pulp and spread over the cooked pudding. Beat egg whites stiff; gradually add sugar and vanilla. Spread over apricots. Bake in a moderate oven until meringue is golden brown. Serve dessert either hot or cold. Serves 6.

Fruit Whip Pie

1 c. cooked, dried apricots, or peaches, or prunes	3 egg whites
$\frac{3}{4}$ c. sugar	2 T. lemon juice
	Baked pastry shell (9 inches)

Mash fruit to a pulp. If prunes are used remove pits. Add $\frac{1}{2}$ cup sugar and stir to blend. Beat egg whites stiff, add lemon juice and gradually beat in the remaining sugar. Fold in fruit in small portions. Pour into baked shell and bake in slow oven, 300° F., for about 40 minutes or until set. Cool on a warm place out of drafts. Serve with a thin layer of sweetened whipped cream if desired. Serves 6.

Spiced Apricot Pie

2 c. dried apricots or peaches	2 T. quick-cooking tapioca
$\frac{1}{2}$ c. water	1 tsp. cinnamon
1 c. sugar	$\frac{1}{4}$ tsp. cloves
$\frac{1}{2}$ tsp. salt	1 T. butter

Prepare sufficient pastry for a double crust. Rinse apricots in boiling water and allow them to soak for a few minutes if very dry. Put apricots through a food chopper using a fine knife. Combine fruit pulp with water, sugar, salt, tapioca and spice. Bring to a boil and continue boiling 3 or 4 minutes, stirring continually to prevent scorching. Pour into pastry lined pie shell, dot with butter, cover with the top

crust and brush over with milk. Bake 30 to 40 minutes in a hot oven, 425° F. Serves 6 to 8.

Apricot Delight

- | | |
|------------------------------------|------------------------|
| 1 c. sweetened,
cooked apricots | 1/4 c. sugar |
| 1 c. liquid from
fruit | 1 T. plain gelatin |
| 1 T. cornstarch | 3 T. cold water |
| 1/2 tsp. cinnamon | 1/4 tsp. salt |
| 1/4 tsp. cloves | 1 c. whipping
cream |

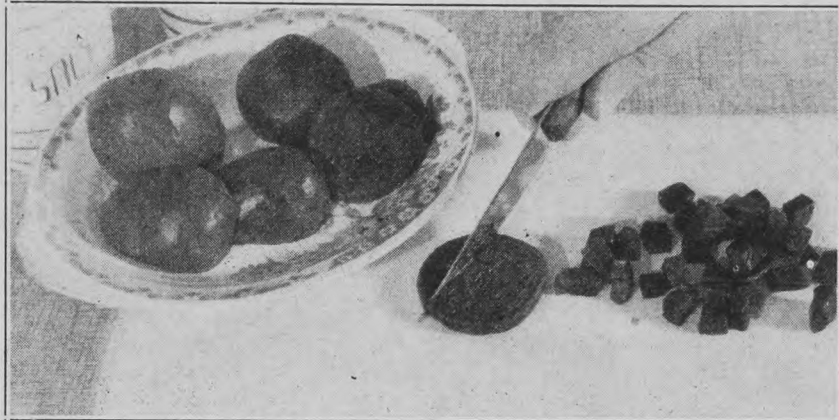
Cut or mash fruit into small parts, add fruit juice, cornstarch, spice, sugar and salt. Blend thoroughly and bring to a boil. Cook and stir until cornstarch is cooked. Remove from the heat and add gelatin that has been moistened in cold water. Stir to dissolve gelatin. Chill until thick but not firm. Whip cream thick but not stiff. Whip cooled fruit mixture into cream, a small portion at a time. Chill.

Serve with a topping of custard or whipped cream. Serves 6.

Apricot Quick Loaf

- | | |
|-------------------------|-------------------------------|
| 1 c. dried apricots | 4 T. butter or
shortening |
| 3 c. sifted flour | 2 eggs |
| 4 tsp. baking
powder | 1 c. milk |
| 1/2 tsp. soda | 2 T. grated rind
of orange |
| 1 1/2 tsp. salt | |
| 3 T. sugar | |

Wash apricots in hot water, drain and put through a food chopper with a medium knife. (If apricots are very dry soak 20 minutes before chopping.) Sift flour with baking powder, soda, salt and sugar. Work butter into flour. Combine beaten eggs with milk, add to dry ingredients and mix. Add apricots and grated orange, mix well. Pour into greased loaf pan. Bake in moderate oven, 350° F., for 1 hour and 15 minutes.



Spicy, buttered beets will add new color and flavor to winter meals.

Beets Made Special

Unusual and tasty recipes that make beets a family favorite

T IRED of the same buttered or pickled beets? Your family will show new interest in this ruby-red vegetable if it appears on the table in these extra-special dishes. The recipes are unusual and so tasty that the family probably will ask for seconds.

The quickest method of cooking beets is in the pressure cooker. Wash them well but leave the skins on—they are more easily removed after cooking. If the oven is already in use beets may be baked in their jackets just as one does potatoes. Then slide off the skins and continue preparations as you choose.

Beet and Celery Salad

- | | |
|-----------------------------|--|
| 1 tsp. sugar | 1/2 c. diced cucum-
ber with skins
left on |
| 2 c. diced,
cooked beets | 1/2 c. diced celery |
| 2 T. minced
pickle | 2 T. chopped
onion |
| 1/3 c. French
dressing | |

Add sugar to French dressing. Combine all ingredients and chill about 1/2 hour. Taste and add salt if necessary. Serve on greens garnished with cucumber.

The French dressing is made by mixing 1 cup salad oil, 1/2 cup vinegar, 1 tsp. each of salt, paprika, sugar and dry mustard and a few grains of cayenne. Shake vigorously each time before using.

Bacon Beets in Sour Cream Gravy

- | | |
|--------------------------|-----------------------------------|
| 4 slices bacon,
diced | 3 c. sliced,
cooked beets |
| 1/2 tsp. salt | 1/4 tsp. pepper |
| 1/2 c. beet juice | 1 c. thick, sour
cream or milk |
| 2 T. flour | |

Fry bacon until crisp; drain. Keep 4 T. bacon fat in pan and blend in flour, salt and pepper. Stir in beet juice and cream. Cook until slightly thickened, about 5 minutes, stirring constantly. Add beets; cover and heat. Sprinkle bacon over top before serving.

Spiced Beets

- | | |
|-----------------------------|-------------------------|
| 1 T. flour | 1/2 tsp. salt |
| 1/4 tsp. paprika | 1/4 tsp. cinnamon |
| 1/4 tsp. nutmeg | 1/8 tsp. cloves |
| 2 T. vinegar | 1/3 c. water |
| 2 c. cooked,
diced beets | 2 T. dark corn
syrup |
| 1 T. melted butter | |

Combine the dry ingredients; blend in the vinegar, water and syrup. Add beets and butter and pour in a greased baking dish; cover. Bake 30 minutes in a moderate oven (375° F.).

Beet Casserole

- | | |
|--|----------------------------|
| 2 T. melted butter | 1 c. buttered
crumbs |
| 1 c. liquid in
which beets
were cooked | 2 T. flour |
| 1 T. sugar | 3/4 tsp. salt |
| 1-2 T. prepared
horseradish | 2 c. diced
cooked beets |

Blend the butter and flour. Gradually add the beet liquid and cook until thick, stirring constantly. Add other ingredients except bread crumbs. Pour into 1 quart casserole and top with the crumbs. Bake 15 to 20 minutes at 375° F.

Pork and Beets

- | | |
|-----------------------------|-------------------------|
| 1 c. diced, lean
pork | 1/4 c. chopped
onion |
| 1/2 tsp. salt | 1/4 tsp. pepper |
| 2 T. flour | 4 c. water |
| 2 c. diced,
cooked beets | 2 T. vinegar |

Brown pork in 1 T. fat; add onion and cook until yellow and tender. Blend in salt, pepper and flour. Add water and simmer 45 minutes. Add beets and cook 10 minutes more, then add vinegar; serve hot.

Stuffed Beets

- | | |
|-------------------------|-----------------|
| 6 medium-sized
beets | 1 T. butter |
| 1 c. boiled peas | Salt and pepper |

Cook beets and skin. Cut in halves crosswise. Hollow out some of the pulp. Mix chopped insides with peas and butter, heat through. Pile into beet cups and serve hot, garnished with a sprig of parsley.



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MAGIC BIRTHDAY CAKE

- | | |
|---|----------------------------------|
| 3 cups sifted pastry flour | 6 tbsps. butter or
margarine |
| or 2 3/4 cups sifted hard-
wheat flour | 1 1/2 cups granulated sugar |
| 4 tps. Magic Baking
Powder | 4 eggs, well beaten |
| 3/4 tsp. salt | 1 1/2 tps. grated orange
rind |
| 6 tbsps. shortening | 1 1/4 cups milk |
| | 1 1/2 tps. vanilla |

Sift flour, Magic Baking Powder and salt together 3 times. Cream shortening and butter or margarine together; gradually blend in sugar. Add beaten eggs, part at a time, beating well after each addition; mix in orange rind. Measure milk and add vanilla. Add flour mixture to creamed mixture about a quarter at a time, alternating with three additions of milk and combining lightly after each addition. Turn into one 7" and one 9" round cake pan, 1 1/2" deep, which have been greased and lined on the bottom with greased paper—if pans are shallow, line sides with a "collar" of greased heavy paper. Bake in moderate oven, 350°, 35 to 45 minutes, depending upon size of cake. Cover and decorate cold cake with butter icing—tinted to match candles, for filling and lower layer.



HERE is one kind of insurance that calls for no outlay in cash; instead it keeps money in your pocket. It consists of information that helps you to conserve your washable clothing.

The mounting cost of textiles has forced consumers to replace old methods of laundering with newer procedures that protect fabrics. The longer your purchases last, the longer you can postpone replacements. This saves actual cash. Further, if the original beauty of the material is retained, the greater your satisfaction.

With this in view, it will pay you to go over your laundry set-up to see whether it is easy on your washables. Start with the water supply because on the prairie it is the Number One Problem. Have you sufficient to do a good cleaning job and is the quality good?

Many people regard hard water as a nuisance to be endured; actually it is far more than that. Besides adding greatly to the burden of washday, it increases the cost of living and shortens the life of fabrics.

Before any dirt can be removed, it is necessary to get rid of the minerals that interfere with cleaning. The harder the water the more softener you must buy. If you do not deal with softening in a systematic manner, you will use more soap than you need, which adds to the expense.

On top of that, there is the damage hard water does to materials. The harm may not be noticeable immediately but week by week hard water weakens yarns, dims colors, causes harshness and starts your garments on the road to the rag bag. Add to all this, the effect of hardness on plumb-

ing and utensils and the total cost becomes staggering.

Insufficient water also plays a part in the cost of living. Without plenty for proper cleansing and thorough rinsing, clothes do not look as nice or last as long as they should.

Unless you are satisfied with your own situation do not delay any longer in seeking improvement. Send for a copy of the free bulletin "Treatment of Farm Water Supplies," prepared by the Prairie Rural Housing Committee. It is packed with valuable information that is worth money to prairie residents. Write to your provincial extension service for a copy.

This pamphlet tells you how to secure a good supply of water, how to deal with hardness, how to install cisterns and dugouts. The diagrams of filters and softening systems are simple and easy to follow. The information is practical, non-technical and full of interest. It can easily save you thousands of dollars by showing how to avoid snags in planning and construction.

OTHER items beside water need checking if you seek to prolong the life of fabrics. Are you relying on one product for removing soil? Years ago, homemade soap was considered sufficient for the entire wash. It varied from batch to batch and many times contained surplus alkali that took a heavy toll of woollens and colored goods.

Today, you can do a better laundry

Washday Insurance

Items in laundering that save money

by MARGARET M. SPEECHLY

job with less wear if you employ several products. The finest soap flakes, or a mild synthetic detergent removes soil easily and effectively from fine fabrics. They are harmed by the kind of soap needed for dealing with the dirt on junior's play clothes. Study the products on the market, experiment with different brands so that you buy only those suitable in your particular situation.

Even the most efficient soaps can easily be wasted in water generally considered soft. Traces of hardness use up a lot of soap in the course of a year, so check your supply carefully. When softening is necessary, are you using the best product?

Washing soda thoroughly dissolved may be the answer to your problem. Or you may like tri-sodium-phosphate (called t-s-p). In any case, measure accurately, not only to save money, but to prevent harm to fabrics. Stir well as you add the softener and allow at least 15 minutes for the chemical to do its work.

Newer types of softener are appearing on the market called normalizers which do not leave sediment or scum as older types do. The water is clear instead of cloudy. These products cost more but it will pay you to keep an eye on them.

Of course you are taking advantage of synthetic detergents, partly because they are not affected by hardness but also because they are excellent for

cleansing woollens and fine fabrics. As with soaps, some are best for gentle cleaning, and others for heavier cleansing.

LITTLE attention was paid years ago, to the part played by temperature in getting clothes clean, but today it is recognized as an important factor in the removal of soil. It is not enough to wash woollens at lukewarm temperature (95°-100°); the rinses must be exactly the same heat.

Merely feeling the water is not enough since some people can stand more warmth than others. It is quite possible that your right hand is not as sensitive to heat as your left. A few degrees one way or the other can add to your cost of living.

It is not necessary to invest in an expensive thermometer—the kind used for dairy work is quite good enough, or perhaps you have a bath thermometer. Give attention to the heat at each step of the washing process and during drying too. It is fatal to hang woollens over the range or on a radiator or to hang them outside in winter or in a cold attic.

Even cottons and linens come cleaner when the temperature is right. A presoak at 90° for a few minutes gets rid of loose dirt and softens protein soil. From then onwards, the hotter the water the more thorough the cleansing will be.

Suds at 140° (too hot for your hands) removes dirt better than at 120°. The hotter the rinses the better the color of the wash will be and this is true of tubfast colors too.

By carefully checking your methods, you may discover other ways of protecting your precious fabrics.

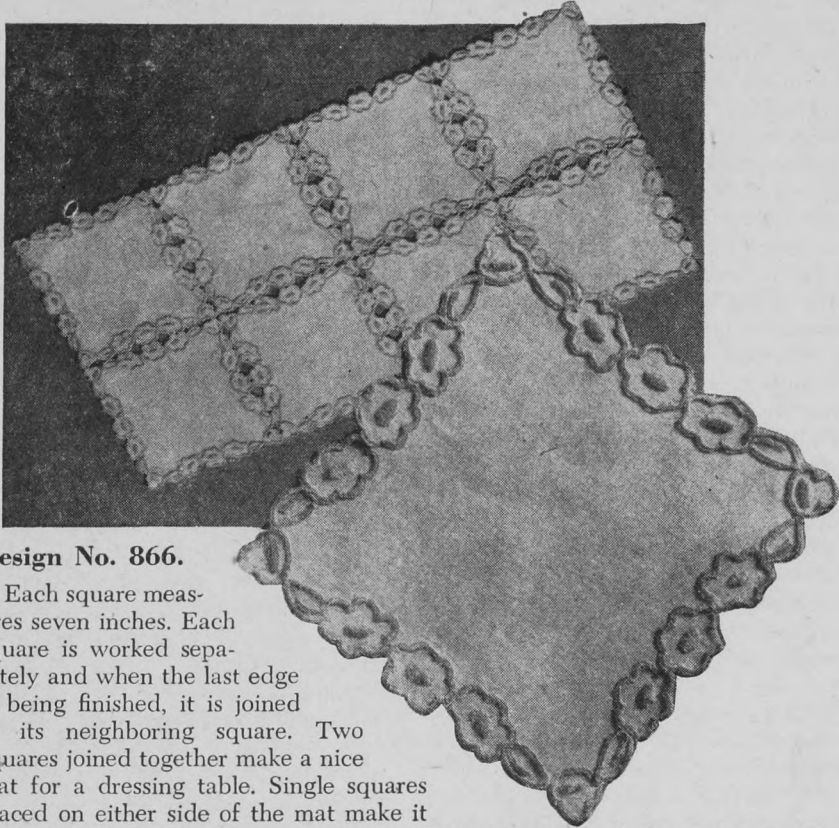
You can't beat that coffee!

First-of-the-Year Ideas

Here are some new and fresh suggestions
for your needlework basket in 1951

by FLORENCE WEBB

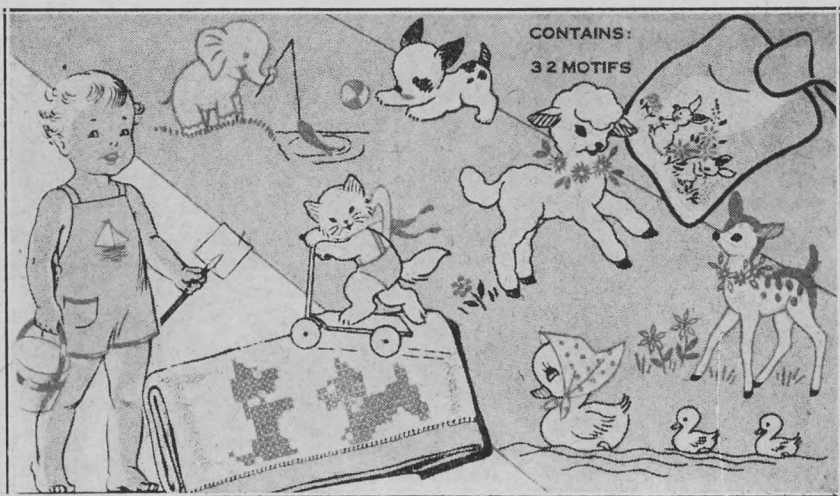
Square-a-Day Linen Pieces



Design No. 866.

Each square measures seven inches. Each square is worked separately and when the last edge is being finished, it is joined to its neighboring square. Two squares joined together make a nice mat for a dressing table. Single squares placed on either side of the mat make it a three-piece set (four squares in all). Four squares worked together make a nice centerpiece for a table. Six squares joined together make a large tray or coffee table cover. Twenty-five squares make a 36 by 36-inch tablecloth. Thirty-six make a 45 by 45-inch cloth and 100 squares make a 72 by 72-inch cloth. Finest quality ivory embroidery linen is used and instructions are included. Squares are 12 cents each. Please state number required and please check to be sure money enclosed is correct. Embroidery floss is five cents per skein (one skein works two squares). Embroidery needles are five cents per package.

Double-Action Embroidery Transfers



Design No. T-158.

These motifs are cute as buttons and are just in time for your spring sewing for the younger members of the family. There are coy ducks; saucy lambs; quaint gazelles; impudent kittens; playful dogs and busy elephants . . . 32 motifs in all to sew on pockets, collars, aprons and the hundred-and-one wearables little ones require. Some are smart, also, for decorating home pieces. And this transfer (called "Silververtex") is something new and different—the transfers are silver-stamp light on dark materials and dark on light materials. Design No. T-158, 30 cents. Embroidery floss (six strand), any color, five cents per skein. Embroidery needles five cents per package.

Note details re materials, color and price.

All items are mailed postage paid.

Order by design number.

Address orders, with correct remittance, to The Country Guide Needlework, Winnipeg, Manitoba.



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. . . not just any fabric for that smart new dress you are planning, but the one and only LYSTAV—with its smooth, sparkling surface. It tailors superbly, it's washable, and is marked TEBILIZED for tested crease-resistance. Choose your favourite from any beautiful plain colours and unusually attractive prints.

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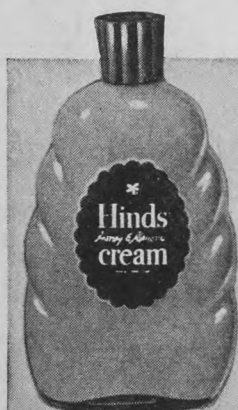


1 SATINIZES PALMS. Even rough palms are soothed and smoothed. New Hinds' "skin-affinity" ingredients actually help to soften calluses.

2 BEAUTIFIES SKIN. New Hinds is enriched with lanolin to make your hands feel softer instantly—protect them longer. Works wonders on rough, dry skin!

3 SOFTENS CUTICLE. Nails look neater with New Hinds helping to keep cuticle pliable. No ragged edges to "catch." Your manicures stay lovely longer.

4 SMOOTHS KNUCKLES. Dry knuckles yield to the smoothing action of New Hinds. Effective emollients "sink in." Hinds dries fast—never feels sticky!



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Hinds HONEY AND ALMOND Cream

Skin Care Through the Years

At every age the individual skin requires special care for true complexion loveliness

by LORETTA MILLER

EVERY age has its own beauty problems. Even the 1951 baby requires specific care if its tender skin is to be preserved in all its fine loveliness. Soap and water, probably the first cleansing aid used on the baby's skin, is undoubtedly the cleanser to be used more than any other throughout the years. The milder the soap and the softer the washcloth, the better for the young skin, but as one grows older, the soap may become a bit heavier and the cloth a little coarser. Certainly a very cleansing soap is necessary to remove city soot and grime from the skin, or actual dirt from the pores.

The tender skin of the child and 'teen-ager, or the very fine skin of the mature woman, will flourish and look its finest if and when the daily cleansing is accomplished with soap and water. Perhaps a follow-up application of a good lubricating cream should be made after each cleansing (or at least after the final cleansing of the day), and allowed to remain on overnight. Such a lubricant would help replace the natural oil of the skin.

The natural reaction of the skin to certain habits of living must never be considered results of negligence. A little understanding of nature's own workings will help tremendously in checking or warding off the natural effects of time.

The very young child has, indeed, very few problems and it is generally thought that the least done with such a skin the better it will be. Frequent mild soap and soft cloth washings, with a thorough rinsing with clear water and gentle drying with a soft towel, will suffice to keep such skin in the pink. During the winter months it may be necessary to protect the skin against exposure to the wind. This is generally a good idea if the skin is cleansed just before exposure. Any cream or lotion used for chapped skin will prove beneficial. A film of camphor ice smoothed over hands, face, legs and lips will do wonders toward keeping the skin smooth and soft and preventing chapping. Such simple daily care is all the kindergarten age requires in the way of beauty care for her skin.

The 'teen-ager's skin may present quite a different problem, especially if she is troubled with that old bugaboo "adolescent skin." These columns have often mentioned the use of soap and water in the general care of this skin problem. However, it's important to know that while soap and water are the best remedial cleansers, it is vitally important that other beauty laws be observed. One important rule is that an over-abundance of greasy, fried and starchy foods be eliminated from the diet and that a very liberal amount of water be drunk each day.

SOME blemished skins may respond best to the use of a washcloth used with soap, while others will find a sponge best for the cleansings, and still others will prefer the use of a bristled brush. This latter is by far the most beneficial method . . . if the skin can take it. In addition to cleansing the



Jane Greer, radio star, uses an upward and outward motion in application of cleansing cream or makeup.

surface of the skin, the little bristles break through the very tiny blemishes, purging them of their imbedded impurities. In addition to this surface cleansing, the stimulating movement of the brush stirs up circulation. This is an essential part of every skin-corrective routine. The skin should be thoroughly rinsed after each cleansing and lots of cold water dashed over it.

Any good antiseptic lotion may be used after each cleansing. Calamine lotion, is especially recommended because it doubles as an antiseptic lotion and makeup. Calamine lotion may be obtained at your local chemist's shop and comes in a soft tint that blends into the skin tone.

Learning the art of putting on a good makeup is very important to one's appearance from 20 to 35 years of age. Learning how to remove every trace of makeup from the skin is even more important to the complexion. Regardless of how heavy or how light the makeup is, the skin should be completely cleansed every night before going to bed and every morning before putting on fresh makeup. This cleansing procedure will practically assure you of a beautiful skin: If you use a heavy makeup, begin your cleansing with a light application of cleansing cream or oil. Then, after removing the first application of oil or cream, make a rich lather on a coarse textured washcloth and scrub off any remaining oil and makeup. Rinse out your washcloth in clear water and go through the cleansing again. Then give the skin a final rinse with cold water and pat the skin dry.

IF a light makeup is used, simply use a heavy lather on a coarse textured washcloth and scrub over face and throat. A well lathered complexion brush is necessary only when the pores seem large, imbedded with impurities, and when the skin appears oily. It is then that the scrubbing does a more thorough cleansing and stimulates circulation. When this is necessary the application of an antiseptic lotion is advisable. Of course calamine lotion may be used any time, either before retiring or before putting on makeup. However, it is best not to use too much makeup with an oily or blemished skin.

From 35 years of age upward, when the skin begins to lose its firmness and

youthful glow, it is more important than ever that intelligent care be given. The young matron is less likely to be troubled with oily skin than her younger sister, and lucky for her, too, as it is only when the skin loses its elasticity that lots of lubricating creams should be used. It isn't well to let creams take the place of soap and water in the cleansing routine, but there is much in favor of creams in the "after 30" beauty routine.

The condition of the skin will determine whether soap and water or creams should predominate in the cleansing, but regardless of which, a light film of cream should be left on the face and throat overnight. This is

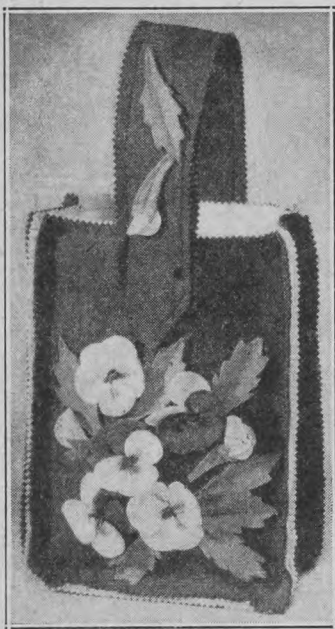
an essential step if the skin tends toward dryness. Be sure to use an upward and outward movement in making the application in order to help keep the muscles of face and throat firm.

The baby's skin, as well as that of her mother and grandmother, will receive many soap and water cleansings through the years. Be sure that the soap is carefully chosen for the individual skin and that every trace is rinsed off after each cleansing. Then follow each cleansing with either an antiseptic lotion to aid in correcting facial blemishes, or a good lubricant to counteract the drying effects of the soap plus the natural elements.

A Gay Felt Bag

Design No. F-100.

This black and yellow felt carry-all is designed for a special purpose—to carry your sock or other small-type knitting and to hold your handkerchief, purse and glasses when you go a-visiting. It measures about ten by seven and one-half inches and has a two and three-quarter-inch gusset. Pansies are stamped on mauve, yellow and purple felt with green for leaves. Easy to assemble and a pleasure to own. Design No. F-100, price \$3.00, complete with making directions. Brown embroidery floss for centers of flowers five cents. You may also order good-quality felt by the yard in most colors at \$2.15 per square yard, postage paid. No. 40 green sewing cotton for leaves five cents. Stamped pansies and leaves only, without the bag are \$1.00. Embroidery needles five cents per package.



An Angorene Beret

Design No. C-357.

Just what 'teen-agers are looking for . . . a pattern for a fuzzy beret. This one is crocheted and the wool is worked over cotton string which gives it body and keeps its shape beautifully. Brush the beret when finished and it will be cozy as can be and flattering as only these hand-made berets can be. Pattern is No. C-357. Price 25 cents.



Embroidered Bedspread Transfer

Design No. T-122.

Did you know that hand-embroidered bedspreads are becoming increasingly popular? Nowadays the pillow cover is usually made separate from the bedspread and, more often than not, the spread is finished with a wide band of plain-colored material. Use unbleached cotton sheeting or any plain upholstery material. Hot iron transfer is No. T-122, price 25 cents. Six-strand embroidery floss (any shades) four cents per eight-yard skein. Embroidery needles, five cents per package.



Address orders to The Country Guide Needlework, Winnipeg.

Greet the Gang!



Munchy Wiener Rolls...

**no trick at all
with new fast
DRY Yeast!**

● For your next get-together, pull a trayful of these steaming rolls out of the hot oven—pop in the "weenies" and ply the mustard. My! they're marvellous—and so easily made with the wonderful new Fleischmann's Royal Fast Rising DRY Yeast!

If you bake at home, *all* your yeast problems are at an end with this new Fleischmann's Yeast. Unlike old-style perishable yeast, it doesn't lose strength, needs no refrigeration! Keeps *full-strength*, *fast-acting* on your kitchen shelf. Buy a month's supply—ask for Fleischmann's Fast Rising DRY Yeast.

Piping Hot WIENER ROLLS

Makes 3 dozen rolls

Scald

- 1 1/2 cups milk
- 1/3 cup granulated sugar
- 3 teaspoons salt
- 1/2 cup shortening

Remove from heat and cool to lukewarm. Meanwhile measure into a large bowl

- 1 cup lukewarm water
- 2 teaspoons granulated sugar

and stir until sugar is dissolved. Sprinkle with contents of

- 2 envelopes Fleischmann's Royal Fast Rising Dry Yeast

Let stand 10 minutes, THEN stir well. Stir in lukewarm milk mixture and

- 3 well-beaten eggs

Stir in

- 4 cups once-sifted bread flour

and beat until smooth; work in

- 4 cups (about) once-sifted bread flour

Grease top of dough, cover and set in warm place, free from draught, and let rise until doubled in bulk.

Turn out dough on lightly-floured board and knead lightly until smooth. Divide into 2 equal portions; cut each portion into 18 equal-size pieces; knead each piece into a slim finger. Place, well apart for crusty buns—closer together for soft-sided buns, on greased cookie sheets. Grease tops. Cover and let rise until doubled in bulk. Bake in hot oven, 425°, about 15 minutes.





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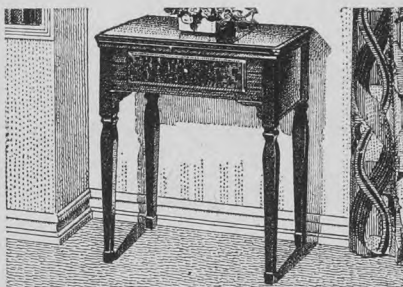
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THE SINGER MFG. CO.

Pure Food

Continued from page 65

ounces, and, most important of all, the dosage of certain potent drugs.

Vitamins may not be mentioned on the label unless there is a reasonable daily intake of the vitamin present in the food or drug. If the food contains them naturally it may only be advertised as a good or excellent source of the particular vitamin. With a drug the amount of vitamin present per gram, capsule or tablet must be stated on the label.

The sale of any food or drug as a treatment for such ailments as obesity, diabetes, cancer, tuberculosis and venereal diseases is forbidden by the Food and Drugs Act. These diseases are so serious that they need professional care. Many people, who would otherwise get medical advice immediately, try these remedies—and continue to try them—until the disease has become extremely serious or even fatal. Others, with apparently incurable diseases, are robbed heartlessly by vendors of "wonder cures" and other frauds which do absolutely nothing for the patient. On one occasion a man was discovered selling a tuberculosis remedy to sanatorium patients at a cost of \$15 for a two-ounce package. Upon investigation it was found to be a mixture of weeds that grew on the creek edge of the man's farm and of no medicinal value whatsoever. Another Westerner was found to be offering for sale silk handkerchiefs for the "healing" of various ailments, some of them serious diseases. Each handkerchief was stamped with the sufferer's name and type of complaint. The handkerchiefs had been "anointed with oil" and "prayed upon" and declared to be a "sure cure." Food and Drug authorities soon put an end to this enterprise and we can rest assured that such businesses cannot flourish for long in Canada.

If you suspect a food of being dangerous, or if a drug is misrepresented, you should not hesitate to tell the authorities about it. In fact it is in your and your neighbor's interest to do so for these reports are of great value in maintaining an efficient food and drug service. The food and drug people, however do not have any control over prices and grades. Complaints to inspectors about cost and quality, in general, serve no useful purpose. You are asked to report about unlabelled package goods, dirty or moldy merchandise, food containing weevils or foreign materials, packages that are too large for the contents within and omissions from labels.

If you wish to report an impure food or an unsafe drug, write to the inspector in your district or, if you do not know his name, to the Food and Drug Regional Headquarters at Winnipeg, Toronto or Vancouver. Do not send a sample of the faulty goods, but only a description of the product and what is wrong with it. Give them the name and address of the store from which it was purchased, the name of the brand and manufacturer and tell them whether or not you have complained to your merchant or druggist about it. The inspector will then get samples from the store indicated and proceed as quickly as possible to correct the errors made.

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From any druggist get 2½ ounces of Pinex. Pour this into a 16 ounce bottle and fill up with granulated sugar syrup to make 16 ounces. The syrup is easily made with 2 cups sugar and 1 cup water, stirred until dissolved. No cooking needed. (Or use corn syrup or liquid honey, instead of sugar syrup.) It's no trouble at all and makes a really splendid medicine. Keeps perfectly and children love its taste.

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BALL CLINIC Dept. 539, Excelsior Springs, Mo.

Youthful Styles for the Matron

No. 470—A flange-shouldered dress with brief sleeves for the mature figure. Make it with a fly front or with self-covered buttons to parade all the way down the front. Sizes 14, 16, 18 and 20 years; 32, 34, 36, 38, 40, 42, 44, 46 and 48-inch bust. Size 18 (36) requires $4\frac{1}{2}$ yards 39-inch material. Price 25 cents.



No. 812—For the woman with a figure problem, a peplum dress. Second version has a jabot collar, short sleeves and a seven-gore skirt. Sizes 14, 16, 18 and 20 years; 32, 34, 36, 38, 40, 42, 44, 46 and 48-inch bust. Size 18 (36) requires $4\frac{1}{2}$ yards 39-inch material; $2\frac{1}{2}$ yards pleating. Price 35 cents.



No. 594—A dress-and-jacket ensemble that has been thoughtfully planned to flatter the larger figure. Dress has very brief sleeves and a tie neckline. Particularly becoming in one of the new tie prints. Sizes 14, 16, 18 and 20 years; 32, 34, 36, 38, 40, 42, 44 and 46-inch bust. Size 18 (36) requires 6 yards 39-inch material. Price 35 cents.

No. 523—Peplum flattery for all sizes up to 46! The bodice may button to a V-neckline or feature a pointed collar. The sleeves may be long, short or very short. Sizes 14, 16, 18 and 20 years; 32, 34, 36, 38, 40, 42, 44 and 46-inch bust. Size 18 (36) requires $4\frac{1}{2}$ yards 39-inch material. Price 35 cents.

No. 756—A dressy frock with cap sleeves, a sweetly curved yoke front and back, and a six-gore skirt. Shawl-collared version included in this pattern. Sizes 14, 16, 18 and 20 years; 32, 34, 36, 38, 40, 42, 44, 46 and 48-inch bust. Size 18 requires $2\frac{1}{2}$ yards 39-inch material; $\frac{1}{2}$ yard 35-inch contrasting; $\frac{1}{8}$ yard ruffling. Price 35 cents.

No. 234—For spectator sports choose this ageless classic. Pattern includes twin peplum ruffles over the hips and jabot-type collar for dress-up occasions. Sizes 14, 16, 18 and 20 years; 32, 34, 36, 38, 40, 42, 44, 46 and 48-inch bust. Size 18 requires 4 yards 35-inch material. Price 25 cents.

Hollywood Fall and Winter Fashion Book—contains almost 200 styles suitable for every occasion this winter. Every pattern shown contains a complete sewing chart. Price of book 35 cents.

No. 488—One-piece dress with a smooth hipline. The jabot-type collar can have a flurry of white embroidery if you like; sleeves can be three-quarter length edged in white or short and scalloped. Sizes 14, 16, 18 and 20 years; 32, 34, 36, 38, 40, 42, 44, 46, 48, 50 and 52-inch bust. Size 18 (36) requires $4\frac{1}{2}$ yards 39-inch material. Price 25 cents.

Hollywood Sewing Book—a complete course in sewing. Contains step-by-step instructions for making a garment in the quickest and easiest manner. Price 25 cents.

Be sure to state correct size and number of pattern when ordering. Write name and address clearly. Note price of each pattern. Address orders to The Country Guide Patterns, Winnipeg, Manitoba.



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Lydia E. Pinkham's TABLETS

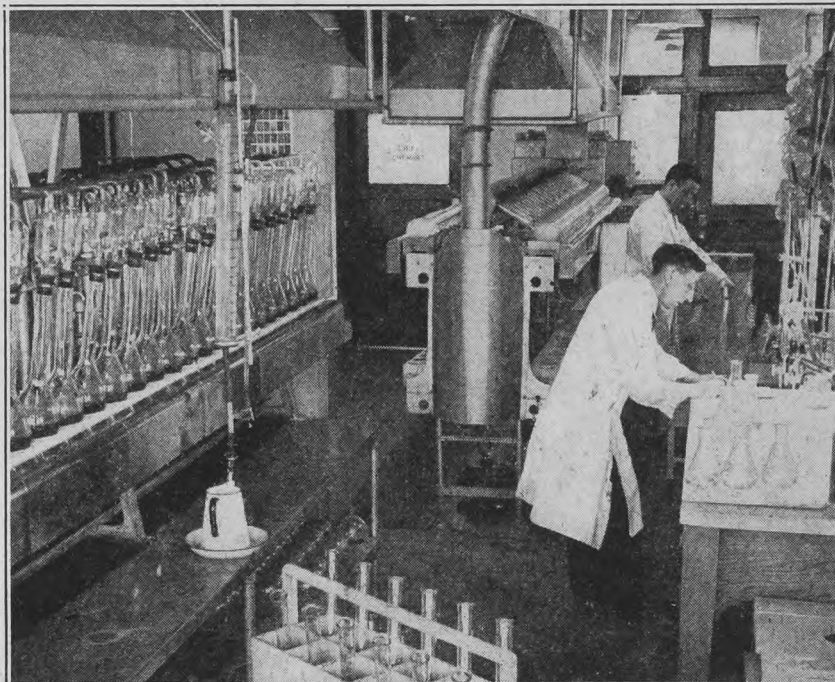
Research Helps

Continued from page 11

(1) To report, as quickly as possible after the beginning of harvest, on the character and quality of the current crop of the several grains, more particularly spring wheat, durum wheat, flax and barley, because these are subjected to manufacturing processes, the success of which is at least partly determined by such factors as the protein content of spring wheat, the macaroni-making quality of durum wheat, the oil content of flax seed, and the malting quality of barley; (2) to keep, in sufficient detail, a continuous series of crop quality records, so that these may form the basis of a continuing research program; (3) to officially

five grades of hard red spring wheat, the first three grades of amber durum wheat and the malting barley grades. A similar survey of the quantity and quality of linseed oil yielded by the different grades, types and varieties of flax seed, is made each year. The Laboratory also investigates and compares Canadian wheats and flours with wheat and flour competing with us in the world markets. This information is made available, not only to the Canadian Wheat Board, but to the Canadian Commercial Intelligence Service. This service, which is represented in many countries, helps to further the sale of Canadian wheat and flour.

In addition, the Laboratory is supplied with average samples for each grade of each kind of grain inspected



The protein laboratory, in which 400 determinations can be made each day.

determine whether proposed new varieties of cereals are equal to, or better in quality than, the standard varieties named in The Canada Grain Act; (4) to service plant breeders by making milling, baking and other tests of potential new varieties or selections, so that individual breeding lines may be discarded or retained for further testing, with greater confidence; and (5) to be the main center for all basic research in Canada relating to the food uses of cereals.

THE 1950 crop of wheat was badly frosted and automatically created special responsibilities for the Laboratory. Fortunately, the last heavily frosted crop, in 1928, was followed by seven years of continuous research into the properties of frosted wheat. Consequently, when the Western Committee on Grain Standards met in the fall of 1950, Dr. Anderson and his associates were able, not only to draw on this important reserve of research information, but to produce for the Committee a quality analysis of more than 3,800 samples of wheat, which had been analyzed for the preparation of 1950-51 grade averages. Similar responsibilities rest on the Laboratory with regard to other types of damage, such as immature, rusted, sprouted, bleached, or spring-threshed grain.

The Laboratory also conducts each year, during the early marketing season, a protein survey of the spring wheat crop, publishing both a preliminary and a final protein survey map. These protein surveys cover the first

for each month of the year. It receives samples of grain unloaded at terminals, and samples of each cargo leaving each Canadian port for overseas. Studies of protein, bushel weight, and other factors are thus made possible. At the end of the crop year, the samples so received are put together to make up average samples for milling, baking and other tests.

IT is a function of the Laboratory to assist, where possible, in the improvement of the Canadian grain-grading system. We have at least some reason to regard our grain-grading system as the best in the world. In its mechanical aspects and in the many precautions taken to eliminate all chance of human error in interpreting the Canada Grain Act, there is very little doubt that our grain-grading system rates a very high degree of excellence. But can we claim with equal assurance that all wheat correctly graded under the Act as No. 1 Northern, is better than some wheat graded with equal correctness as No. 2 Northern? Can we also feel with certainty that our grading system is equally good for all grain producers? Is it true that foreign buyers of Canadian grain always receive the same quality of wheat when they buy and pay for the same grade? It is the function of the Laboratory to try and find answers to such questions.

Even if answers to some of these questions can be found and we learn that our Act and our grading system are not perfect, the solution of the problem is often very difficult to

secure; and even when found, may not be workable. Very often its workability will depend on the willingness of farmers to accept it.

Over the years, almost exactly two-thirds of our wheat crop grades No. 2 Northern or higher. Purchasers have learned to expect certain milling and baking qualities from wheat of these top grades. It would, therefore, be very undesirable to lower their quality. This is why, some years ago, when Garnet wheat was introduced, it was given separate grades by special amendment to the Canada Grain Act, after milling and baking tests had clearly established the fact that this variety would tend to lower the average quality of our top grades, if allowed to remain in them. For the same reason, Red Bobs will not be graded higher than No. 3 Northern, after August 1 this year. Another example is to be found in the grades of durum wheats. For a time there was very little difference in quality between Nos. 1, 2 and 3 Clear Amber Durum. Study of the macaroni-making qualities of different varieties eventually led to the removal of varieties of the Pelissier type from the top two grades. Now, the other varieties bring a premium in Nos. 1 and 2 Clear Amber Durum, more in keeping with their quality.

ALL of these and other changes are based largely, if not entirely, on

long investigation in the Grain Research Laboratory. The problem of protein tests and what is called protein grading, is familiar to nearly everyone. It is a long-established fact that high protein makes for a "stronger" flour when used for baking, if the quality of the protein is not damaged from any cause. The Laboratory clearly established the conclusion, after the 1928 crop, that in such a year, grades as low as No. 4 Northern or No. 5 may have as much, or even more protein than No. 2, and yet yield poorer loaves (in 1950, more ash, poorer color, less volume, and decreased flour yield) than are secured from the undamaged protein of No. 2 Northern. As a result of more than 23 years of protein research, Dr. Anderson has recently made certain proposals (see The Country Guide for January, page 35) looking to a recognition of protein as a major factor in wheat grading. Time alone will tell whether these will prove acceptable to farmers and others.

Barley research was taken over from the University of Manitoba in 1935, and is conducted in two adjoining, small laboratories, one devoted to the analysis of barley and malt, and to producing regularly each week, malt samples for research purposes; and the other for basic research on malting quality.

Malting tests of barley correspond to the milling and baking tests of

wheat. Malt has many uses—in breakfast foods, milkshakes, vitamin preparations as well as in brewed or distilled products; and the process by which barley is converted into malt is a duplication of the process which occurs underground when the barley seed begins to sprout.

MENTION has already been made of the fact that the Canada Grain Act establishes Marquis as the standard of quality for spring wheat, Mindum for durum wheats, and O.A.C. 21 for malting barley. An elaborate and far-reaching system of tests and controls has been set up in Canada, which applies to all new varieties produced by Canadian plant breeders, or introduced from another country. It includes a long and thorough study of their cultural, as well as their quality characteristics. Each year the official trials, made on 23 experimental stations across western Canada, include four standard varieties and 21 new varieties which plant breeders wish to test. Each variety may be tested for a minimum of three years, or it may drop out after a year or two. If it carries through three years it is grown in larger quantity the fourth year, and samples are sent overseas to several chemists in the United Kingdom and a few in the United States, for testing. Canadian milling companies co-operate, as does the laboratory of the Cereal Division

at the Experimental Farm, Ottawa. The final determination of wheat quality, however, rests with the Grain Research Laboratory of the Board of Grain Commissioners; and this involves not only tests of milling, baking and protein quality, but several tests of the physical properties of dough, as well as chemical tests to determine differences in the quality of the flour.

Should any reader not find in this outline, evidence of a sufficient return in the form of useful and productive work to warrant the expenditure of \$1.50 per wheat grower out of the public treasury, he would probably find the deficiency more than made up, following a brief study of any one of the annual reports of the Laboratory. He would find that the Laboratory staff, up to the time of the last published report, had written over 100 scientific papers. Each year the Laboratory publishes four crop bulletins and various press releases on the quality of bread wheats, macaroni wheats, barley and flax. In its annual report it gives accounts of the research projects undertaken during the year. One need be only a mild research enthusiast to realize that the work of the Grain Research Laboratory of the Board of Grain Commissioners for Canada is essential to the maintenance of quality in Canadian grain crops and to any further improvement in Canada's grain-grading system.

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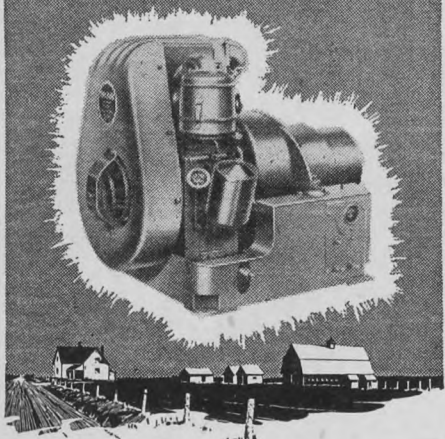


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C.F.A. Highlights

Continued from page 7

the net income received by the average farm operator during the past nine years, the relationship between the two has held fairly steady. Indeed, Dr. Hope believed that "over the past nine years the average relationship between the earnings of farm and non-farm people as a whole has been about as fair as could be achieved under a free society."

It will probably clarify the matter in the minds of many readers a little better if it is explained that when the Dominion Bureau of Statistics speaks of net farm income, this figure includes interest on investment, (approximately \$10,000 in 1946), allowance for all work done by unpaid family labor, in addition to any amount due the farmer for managing his business. After these deductions, if any, are made from the D.B.S. net income figure, what remains is the return the average farm operator receives for his own physical labor during the year. It is very significant, however, that despite these factors in net farm income which keep it from strict comparability with wages and salaries, Canadian agriculture has, since June of 1948, experienced a decline in parity ratio between the two from 114.2 at that time, to 98.3 in October, 1950.

THE C.F.A. Annual Meeting is probably unlike that of any other Canadian national organization. Strictly speaking, it is a meeting of its Board of Directors, who represent member organizations from coast to coast. A national meeting of individual farmer members would be quite impracticable and far too expensive for the Federation to manage. Its constituent members are the provincial federations of agriculture in each province, together with other organizations which operate on an inter-provincial basis. These provincial federations, in turn, have as members, relatively large numbers of educational and co-operative organizations operating within the province. Individual farmers secure membership and representation in the Canadian Federation of Agriculture, through the local or other organizations to which they belong, which in turn are represented in the provincial federation, and through this organization, in the Canadian Federation of Agriculture.

Thus, at Calgary, some 70 resolutions eventually came before the Board of Directors for consideration. These may have originated with some small local body of producers, or some small farmers' co-operative organization in any province. Perhaps, to start with, some hundreds of resolutions reached the provincial federations. Some were tabled or voted out at this point: The remainder went forward to what are called the Eastern and Western Conferences. These are two or three-day meetings immediately before the meeting of the C.F.A., at which the representatives of eastern Canada and of western Canada meet independently to consider the resolutions coming forward from their respective halves of the country. Here again the number is whittled down by discussion and voting. Some of the remaining resolutions are probably contentious and may or may not be usefully discussed in a public meeting.

Other resolutions require more study, which can perhaps be given to better advantage by the central organization.

For the purpose of public discussion, two days of open meetings are held as a part of the annual meeting and preceding the meeting of the Board of Directors. It is here that the president and the secretary report the progress of the organization during the year, and where addresses of an informative character are presented. This year the Minister of Agriculture, The Rt. Hon. James G. Gardiner was present on the second day, at which time he explained the history of British food purchases from Canada, with special reference to the recently terminated wartime and postwar food contracts. In a later issue, Mr. Gardiner's advice will be given fuller treatment than can be provided here.

PERHAPS the most contentious resolution to come before any of the western producers' meetings had to do with the final payment on the five-year pool. This, of course, is a matter of vital interest to the wheat producers of the Prairie Provinces. Involved in the discussion was the final price to be secured for some 1.3 billion bushels of wheat marketed by wheat producers during the past five years. Nearly everyone by now is well acquainted with the controversial nature of this question. With \$1.75 per bushel, basis No. 1, received by producers so far, and with no more than another four or five cents in the kitty, with which to make a final payment from the sale of wheat, opinions differed greatly as to the stand the C.F.A. should take. The western conference had debated it vigorously the previous week and had with great difficulty, against the spirited arguments of the Alberta provincial organizations and the Farmers Union of Saskatchewan, achieved a compromise resolution.

This resolution supported the principle of the representations already made to Ottawa by various prairie farm organizations, to the effect that proceeds from the sale of pool wheat cannot provide a satisfactory settlement; and it urged that the money now available "should be supplemented by a very substantial amount per bushel by the Government of Canada, to recognize the fact that the income of wheat producers for those years was limited by the effects of government policy and procedure; and to recognize the responsibility on the part of the Government for the terms of the wheat sales contract which, in 1946, it made with the Government of the United Kingdom." The meeting accepted this resolution in the spirit of compromise, while at the same time agreeing that those who preferred to voice a specific demand of 25 cents per bushel to bring the final pool price to a minimum of \$2.00 per bushel, basis No. 1 Northern, would still be free to do so.

Mr. Gardiner, in response to questions, said that negotiations were still proceeding between the Canadian and the U.K. governments on the subject of a further payment by Britain, and he could not hazard a guess as to when they would be concluded.

Another contentious question had to do with the compulsory marketing of coarse grains through the Canadian Wheat Board. This too was solved by compromise, though eastern Canada



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has been greatly disappointed because of the wide fluctuations in the prices of oats and barley during the 1949-50 crop year. They continued to resent the effect of the speculative market on the course of feed grain prices, but accepted the following resolution put forward by prairie farm organizations: "That Canadian Wheat Board marketing policy for coarse grains be so designed as to make the minimum use of the futures market, to the end that such experience may point the way to a sound and more acceptable marketing policy."

A third, and in some ways, the most difficult of all subjects to come before the meeting, had to do with hog prices. Despite the fact that carcass prices for hogs at Calgary in late January were equal to, or slightly above, the floor prices set by the government for Grade A Wiltshires at seaboard, western members were strongly desirous of entry into the U.S. market, especially for off-grades. To do this would seem to require some form of live grading, which eastern representatives were inclined to oppose vigorously. They dislike, as well, the idea of the American market which currently was about \$3 below Calgary. Westerners took the view that hog prices are considerably lower than those of cattle and sheep, both of which have access to the U.S. market, although the present level of hog prices is fairly satisfactory considering present costs of production.

Nevertheless, present prices are due solely to high domestic consumption plus a drastic and unexpected slump

in production during the last half of 1950. A probable increase in hog deliveries due to large amounts of damaged feed grain could well cause a serious slump in hog prices as soon as a surplus appears. At such a time, the packers would have access to the American market for pork products, but producers would be denied the same market for live hogs. Thus, should carcass prices drop to the floor, it would be totally unsatisfactory to hog producers right across Canada. The meeting, therefore, urged through the C.F.A., that a price program for hogs be established which would be at least equal to the price the producer would secure if he had access to the U.S. market. In addition, the C.F.A. will probably call a meeting of livestock producer organizations from all provinces, about August.

The Canadian Federation of Agriculture will present its annual brief to the government respecting these and other problems dealt with by the convention, on February 15. It will hold its next annual meeting in Montreal in January, 1952, and if present plans are not changed, will meet in Vancouver in 1953. Officers for the ensuing year continue unchanged, with H. H. Hannam, president; W. J. Parker, president Manitoba Pool Elevators as vice-president, and Colin G. Groff, secretary-treasurer. For the information of readers who may wish to communicate with the C.F.A. national headquarters, the address is Canadian Federation of Agriculture, 111 Sparks Street, Ottawa.

Reclaiming Damp Grain

Insects, mites and molds cause grain losses

HIGH yields and a wet fall combined to make necessary the storage of large amounts of out-of-condition grain on farms. Insects, mites or molds can cause serious losses in stored grains.

Most storage problems are a result of grain being tough: Grain that is uniformly dry will not readily spoil. A farmer's first objective is to store his grain in a dry condition in a clean, weatherproof, well-ventilated granary. Even then grain should be examined periodically, because leaks, seepage or condensation may make grain damp, and cause local heating. If heating and insect infestation appear serious, damage can be avoided by transferring the grain when the weather is cold.

For long-term storage on the farm, several small granaries are better than one large one and, in all cases, it is well to have the granary floor above ground level. If tough, damp or weed-infested grain is to be stored it should be kept in small bins and marketed as soon as possible.

A number of procedures may be needed to keep dry grain from becoming damp. Leaky roofs, doors and windows should be repaired to exclude moisture, and concrete floors should be covered with moisture-proof paper. Before grain is put into a bin the walls and floors should be thoroughly cleaned, and hydrated lime swept about on the floor so that all cracks are filled. If mites or insects were found in the bin during the previous year the inside walls should be coated with whitewash containing

one-quarter of a pound of lye per gallon. To allow free air movement, the granary should not be filled above the plate.

Stored grain should be examined every two weeks, as it is possible for grain to become damp from rain, snow or ground moisture. In large granaries the moisture of the grain may condense on surface layers. The owner should look for damp or crusted grain, thrust his hand under the surface to detect heating, and smell the grain to detect foreign odors. For more complete examination thrust a metal rod three or four feet into the grain in a number of places. Resistance to its passage will indicate spots of tough grain. In suspected spots leave the rod in the grain for 10 minutes and then test it with the back of the hand for warmth.

Heating and insect infestation will sometimes develop despite all precautions. It is suggested by H. E. Gray, Stored Product Insect Investigations, Ottawa and B. N. Smallman, Stored Product Insect Laboratory, Winnipeg, that grain that is infested, moldy or abnormal in odor should be transferred to a clean granary, a tarpaulin, or bare ground. If it can be done it is well to clean the grain during the transfer. A strong air blast and a light feed of grain is desirable. Material removed should be destroyed. The transfer and cleaning of out-of-condition grain is helpful at any time, but if it can be done during cold winter weather it is more effective, and the grain may remain in good condition throughout the summer.—R.O.H.

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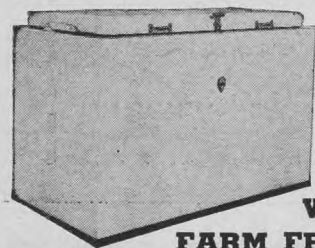
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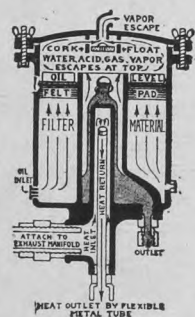
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The Fascinating Story of Railways

The traveller encounters interesting features the world around

by H. RIVER

THE story of the world's railways is fascinating. A train starting on New Year's Day and travelling non-stop at 60 miles an hour would have covered the length of the track in all countries by July the following year.

The longest journey possible in Europe without changing trains is by Simplon-Orient Express from Paris to Istanbul—1,882 miles, which are covered in 75 hours. It takes 24 hours through France, Switzerland and Northern Italy to Trieste, a further 24 hours to the eastern end of Yugoslavia at Belgrade, and at the end of the third day of travelling Europe's most glamorous train pulls up at the small frontier station of Mustapha Pasha near the "Balkan Triangle," where Bulgaria, Greece and Turkey meet. Ten times en route there is a passport, baggage and money check. The proposed train ferry across the Bosphorus from Istanbul has never been built and passengers for near eastern destinations cross by steamer and board the "Taurus Express" at Hydrapasa.

The longest non-stop journey in the world is London-Edinburgh. Such famous trains as "The Flying Scotsman" and "Capitals" manage the 393-odd miles in just over seven hours. Water is sucked up by the engine from miles-long troughs embedded in the middle of the track. In Britain, many postal expresses haul mail bags aboard without stopping. By means of a flexible hook on the rear coach, the pouches are torn from a steel contraption on the platform.

The most modern train in Europe, complete with observation car and movable Pullman seats, has recently been put into regular service in Spain. All the same, Spain is a country still backward in railway development, due, chiefly, to the extraordinarily wide gauge of five feet six inches, which is six inches wider even than the Russian gauge and also compares unfavorably with the standard gauge of four feet eight and one-half inches in the rest of Europe, North America and many other systems.

ONE of the most peculiar trains in the world runs from Dublin to Killarney in southern Ireland. The train staff includes a combined tourists' guide and compere. Over an elaborate loudspeaker system he gives a running commentary on the landscape passing by, and now and again invites passengers to lend further color to his broadcast by coming to the microphone to sing. All this entertainment aboard the train is free.

The absolute speed record is still held by the German Kruckenberg car, the "Rail Zepp" as it used to be called, which, in 1931, reached a top speed of 141 miles an hour. The previous world record of 128 miles dated from 1903, the days before the first "Flying Machine," was also set up by a German train, driven by an electric engine. Before the Second World War, there were eight diesel trains on the German State Railways with an overall average travelling speed of 80 miles an hour inclusive of halts.

The longest journey in the world that can be undertaken in one single

train is by the Trans-Siberian Railway from Moscow to Vladivostok, a distance of 6,500 miles. It takes nine days to reach the far eastern shores of the Pacific, and the most interesting part of the otherwise dreary trail through endless steppe and forests is the mountainous section on Lake Baikal with its maze of tunnels and hazardous viaducts.

The fastest train in Asia is the "Asia Express," which covers the 435 miles from Dairen to Hsinking in Manchuria in well under nine hours. One of the most famous trains in the Far East, apart from many adventurous lines in China, is the "Honey-moon Special," running nightly from Tokyo to the beautiful seaside resort of Atami where Nippon's newlyweds of repute spend the first two weeks of their married life.

IN India there is a railway resembling more than anything else the scenic railway on a midway. It is the Darjeeling-Himalaya line, leading almost up to the frontier of remote Tibet. This toy railway, as it is appropriately nicknamed, is laid on the extremely narrow gauge of two feet. The coaches are box-like and tiny, the engine weighs a mere 14 tons and the maximum speed is only 12 miles an hour. The line has some of the steepest gradients of any adhesive-type railway in the world and climbs 7,000 feet over less than 50 miles of track. There are hair-raising spirals, figure-of-eight loops, sharp curves, viaducts and tunnels, which are indeed frightening to all except, perhaps, the native season ticket holders who are used to them and therefore are less shaken by the train's continuous rocking, rolling, heaving and squeaking.

The world's highest railway station on an ordinary type track is Ticlio, on the Peruvian line from Lima to Huan-cayo. Ticlio station, although only 90 miles from the coast, is 15,600 feet above sea level, but snow free because of the nearness of the equator. The greatest altitude reached by any railway on smooth wheels is also in South America, on the Chile-Bolivia route—15,817 feet up in the Andes.

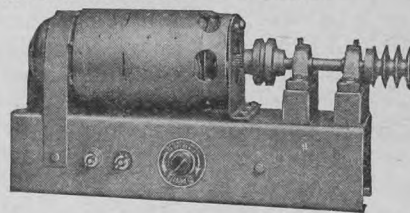
On some of the Andes lines, the trains are so often reversed and alternatively pulled or pushed by the powerful engine that travellers become easy victims of dizziness and mountain sickness in spite of the oxygen breathing apparatus supplied by the guard. A compensation for these sacrifices, however, is the inconceivably beautiful view, from the carriage windows, of some of nature's most romantic scenery. The Lima-Huan-cayo line in central Peru leads through 65 tunnels and over as many bridges and viaducts, the longest of which spans 250 feet with the river Rimac thousands of feet below. It surely is an exciting adventure to cross the Andes by train, and one marvels at the fantastic feats of the engineers—and also at the neck-breaking achievements of the locomotives on long stretches which virtually run over the roof of the world.

There are many curiosities about the world's railways: open roof double-decker passenger coaches in tropical

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Africa, special water-carrying cars in Australia, Japanese fish trains bringing live seafood to the towns. Swiss Diesel engines pulling long trains with sleeping cars and dining cars up to a height of 10,000 feet. . . . But most railway records are held in the United States, except, incidentally, for the density of the network, where Britain leads the world.

The American locomotives of the "Big Boy" class are the bulkiest in the world. They stand on 24 wheels, including the front carriage with bogie wheels, measure 73 feet in length, weigh 340 tons without the tender, and develop up to 7,000 horsepower. The chassis is arranged to pivot for the purpose of enabling the negotiation of all bends.

America also holds all records for the longest train journeys in the fastest times. But coast-to-coast through trains exist in Canada only; in the States there is always an "all change" at Chicago. Many of the ultra-modern "Super Flyers" reach top speeds of over 100 miles an hour. The "Twentieth Century Limited" does an average of 73 miles an hour over the 900 miles from New York to Chicago.

The most congested long distance route in the world is the 225 miles of track from New York to Washington. The 67 express trains which daily run over this line average an over-all travelling speed of 52 miles an hour inclusive of stops at Philadelphia, Wilmington and Baltimore.

The busiest railway junction in the world, however, is in Britain. It is Clapham Junction, London's southern exit, where in a 24-hour period 2,600 long-distance and suburban trains either arrive, depart or speed past and where the station master's timetable is divided into sixths of a minute.

Peace Tower

Continued from page 4

great reputation in diplomacy behind him. That was one sign of the new de-emphasis. But then began a series of changes in personnel, which saw all the old crowd pretty well cleared out. Those who were on intimate terms with the East Block, those who really co-operated with External Affairs to the point of carrying out errands for them, have gone. The new gang are tougher, less Canada-minded. This is no accident. Uncle Sam is cooling off.

The chill is on, as I said, over at the U.S. Embassy. There has been a major shakeup in their Striped Pant sector. For instance, Don C. Bliss, a 53-year-old economic expert, has replaced easy-going Julian F. Harrington. Americans would call him a Canadian appeaser.

THEN a short while ago, the second ranking counsellor at the Embassy, Richard W. Byrd, was transferred to Canberra. In addition, former military attaches have been replaced with others.

There is no doubt about it. These two capitals are not as chummy as they used to be. Changes in personnel are just symbols.

The truth is that the Americans are bitterly disappointed by the Canadian government's hesitation.

At one time, earlier in the Korean crisis, Ambassador Woodward even flew to St. Patrice, where Prime Minister St. Laurent has his summer cot-

tage, to emphasize the seriousness of the situation. In street language, he told us to get the lead out of our pants.

Meanwhile, Ottawa, long used to being treated like a favorite son, hates this dictation from Washington. But it looks as if we are going to have to swallow it. Nor must you be surprised, if economic sanctions are applied. We might find we need more steel than Uncle Sam "finds convenient" to give us. Other strategic materials may turn up missing, and if we dig deeply enough, we may find out this is their "tat" in a tit for tat, for our failure to send enough men, soon enough, to Korea.

If we start throwing 1914 and 1939 at them, they may answer back: "What about Korea?" At the moment, there doesn't seem to be a very good answer to that one.

The opinions expressed Under the Peace Tower are those of our correspondent and not necessarily those of The Country Guide.

B.C. Letter

Continued from page 14

of other goods. Also in the realm of transportation was the proposal that offshore shipments of Canadian tree fruit be awarded a subsidy to offset a similar bonus of \$1.25 per box paid by Washington for United States fruit.

Still unsettled is the claim of British Columbia fruit growers for federal compensation to cover their crop losses during the unprecedented winter of 1949-50. The loss of orchards as a result of that severe season calls for a program of assistance amounting to at least \$2,000,000, according to the growers' plea, which is supported by the provincial government and voiced in Ottawa by Minister of Agriculture Harry Bowman.

So much for the fruit men and their complaints. The bulb growers could hardly have had it better, as the saying goes. Prices were lower than during the war when local shortages were intensified, but there could be no laments over demand. The Vancouver Island association, whose tulip, daffodil and iris crops are harvested chiefly in the Saanich peninsula around Patricia Bay, shipped heavily to markets scattered across Canada and the United States, and about 2,000,000 tulip bulbs were marketed. Because Easter is relatively early this year, Easter lilies were precooled in refrigerated storage before shipment to advance the time of flowering.

Error

THE following incorrect statement appeared on page 16 of The Country Guide for January in connection with the report of the annual convention of the Farmers' Union of Alberta: "The constitution has been amended so that no known Communist may hold office in the organization in the future." The facts are that the F.U.A. Convention passed a resolution to this effect with respect to the provincial directorate of 24 members with the proviso that legal advice should first be sought before implementing the resolution. The convention also approved a change in the constitution providing for certain procedures by which members of the Board may be expelled from the organization by the Board, subject to the right of the expelled person to appeal to the next annual convention.

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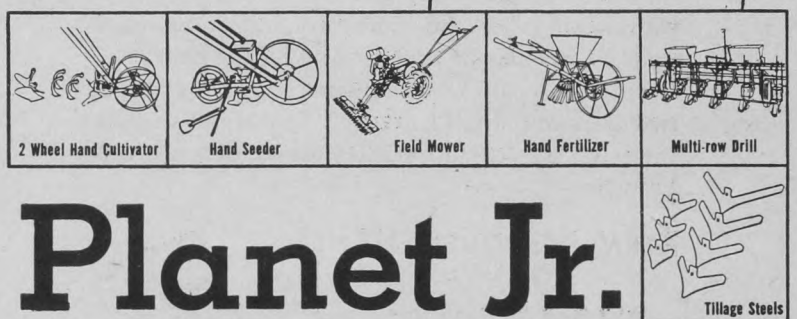
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Phantom of the Wild

Continued from page 10

But they had found a fresh trail.

I would have raced after the dogs. Lee Burke only moved a little, listening and taking it easy. For perhaps an hour we could trace the dogs' course by their intermittent yelping. It would stop suddenly, then come from a different quarter. They were combing the forest in a wide arc from the main meadow to the top of a surrounding ridge. When in time there was a long silence, Lee Burke began to look troubled.

"This cat of yours," he said, "hasn't been taking any chances."

I knew what he meant. A mountain lion knows all the tricks of a fox, and some of its own, in ways to leave a mixed-up trail. This particular lion had been travelling here for more than a month. That the two hounds could work out fresh tracks from the maze of older ones, seemed hardly believable. But they did.

THEIR voices burst out abruptly, still yelping, but more frenzied now. The sound came from a pine ridge behind us, a mile from where we had last heard the dogs. We started toward them. They continued to follow along the ridge. It was some time before we had them in sight, among

tall-trunked pines with no underbrush. I could see what a crooked trail they were working on, looping and twisting through the forest. And I began to see, also, how much patience a man had to have in this game. It was no fast chase. That part would come only near the end, when the dogs had the cat in sight and could run it up a tree.

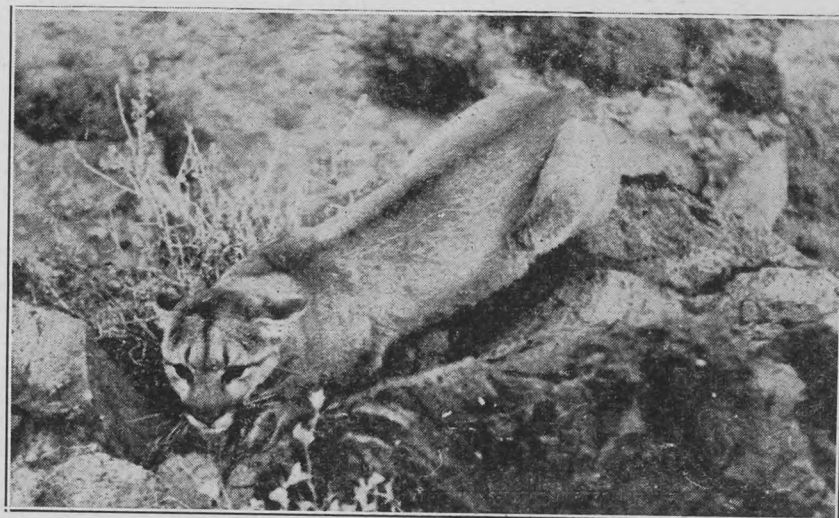
We followed the hounds slowly. By noon they had led us into a country where three canyons sloped below us like spreading fingers. They emptied into the steep-walled gorge of a mountain river. The cat's trail straightened when it entered the first canyon bottom, as if the animal were no longer wary. Here the dogs started running, showing their noses along the pine needle mat.

Burke and I tried to keep close to them. The lion hunter was in a hurry, for the first time today. We were halfway down the canyon, when he stopped and said, "I've got it figured out, I think. Our cat went down to water, but it won't swim the river. And it can't get around those rock cliffs to the south. So it'll turn and come back in one of these canyons to the north.

an easy lope, turned and recrossed along the same route. Then it paused, looking back in the direction of the river, before loping on toward the next pothole in the chain. When it vanished I realized what I had been watching—a mountain lion in the actual process of leaving a tangled trail to confuse the dogs!

I rode down to Burke and he put his hounds on the fresh tracks in the chain of potholes. Yet our cat had still another trick. We might have overtaken it in the forest. Instead, its trail led us to the high barrier of jagged granite boulders. A mountain lion can leap 20 feet from a crouched start. It can make a running jump of 18 feet from the ground up the side of a tree trunk. By making leaps like that from rock to rock, this one left hardly any trail for the dogs to follow.

We worked afoot along the barrier until almost dark. Burke was stubborn. But he stopped at last and sat down with the dogs panting beside him. I had my glasses out and kept searching the barrier crest. A band of sunlight was still up there close to the top. And I found our cat. It lay on a ledge of rock, resting. Since we were



A cougar waiting among the rocks for a pounce.

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You ride up on this crest above us." He waved toward the high-powered glasses strapped to my saddle horn. "Maybe you can spot it with those. If you see it coming back, you ride down and head it off."

Just like that! Head off 200 or 300 pounds of running mountain lion. Still, I knew it should take to a tree if its way was blocked by a man.

I rode up to a barren backbone separating one canyon from the next. But Burke had made a bad guess. Or the lion had become wary again. The sound of the dogs' voices moved toward the river. There they stopped. Once, after a long wait, I found them with my glasses. They were having trouble with the cat's trail.

From near the river gorge where the dogs were stopped, a chain of "pothole" meadows ran back to the north—small, round patches of grass against the darker green forest. Still farther north was a high granite barrier, flung out like a buttress from one of the Sierra Nevada's 14,000-foot peaks. It was pure luck that I moved my glasses onto the first pothole meadow at the same moment that a yellow-brown shape moved across the green grass.

It was our cat, all right. Yet it was in no hurry. It crossed the meadow in

almost in darkness now, it may not have seen us. In a moment, slowly, a pair of small pale-yellow heads appeared above the tawny back. Two small cubs climbed over and began to play on the ledge.

I handed the glasses to Burke. He took a long look. It was a surprising thing he said then, for a man who had spent much of his life hunting mountain lions, and who had just been outsmarted by one.

He lowered the glasses. Gently, he said, "Now isn't that a pretty sight!"

Well, it was. Forgetting all else about the animal up there, it was a mother come safely home at last.

Burke looked once more. "This explains why she hunted so close around here," he said. "But I don't think you'll have any more trouble. She knows there are dogs in the country now. She'll take those cubs and get out."

Lee Burke was right. A mountain lion is a good mother, staying with her youngsters and protecting them until they are as much as two years old. Perhaps this one took her family into the hundreds of miles of primitive area, set apart for all wild life in the High Sierra. At any rate, she never came back to my meadow again.

The Country Boy and Girl



"WINGED Tiger of the Air." This was the name given to the Great Horned Owl by the famous naturalist, Ernest Thompson Seton. A fitting name it is, for this large tawny-grey bird is perhaps the most fierce bird in North America. With a quick swoop it lands on its prey—turkeys, rabbits or mice and instantly kills the luckless victim with its powerful talons. A rabbit caught in a snare may squeal and at once the Winged Tiger is on the spot to claim the game.

Most country boys and girls are familiar with the hooting of the Great Horned Owl at night but perhaps you do not know that this bird is one of the earliest nesting birds we know. Sometimes if you are walking through the woods in the middle of February you may be startled by the sudden rising of a pair of tufted ears above some old crow's nest that you thought was abandoned. Walk a little closer and you will see the round, cruel eyes of a Great Horned Owl staring fixedly at you. The bird lays two large, white eggs in a nest which may have once belonged to a crow or hawk.

How can these eggs hatch out in 30 below weather? That is one of Nature's mysteries, but the eggs of the Great Horned Owl do hatch, usually in March. The owlets are covered with thick white down and their parents feed them large quantities of rabbits, pigeons, ruffed grouse and squirrels. The owlets often stay in the nest until they are larger than their parents. Even after they have left the nest the parents still

feed them and teach them how to hunt. By late summer the young birds are looking after themselves. The Great Horned Owl is a cruel, fierce hunter, but it faithfully protects and cares for its young.

Ann Sankey

Jumpina's Valentine

by Mary Grannan

JUMPINA was a pretty little mouse who lived in the cellar of a little white cottage. Jumpina was the finest jumper among all the mice who lived in the cellars along the street.

"Do you know," said Longtail Grey-mouse, "that Jumpina jumped from the cellar window to the other side of the street without so much as disturbing a hair of her grey coat?" The other mice laughed, and said that this was hard to believe and that if he wanted the truth, they didn't believe it.

"But," said Longtail, "I saw her do it. I was with her when she did it."

An old grandmother mouse smiled kindly and said to Longtail, "We know you were with her, Longtail. You're always with Jumpina." Longtail flushed, as Grandmother went on, "This we do believe, Longtail. We think that you're going to get the finest valentine that comes into the cellar this year. We think that more than Jumpina's feet jump. We think her heart jumps too . . . every time she sees you."

The wise old grandmother mouse was right, because at that very moment, the lovely little Jumpina was saying to herself, "I must get Longtail a valentine. It must be a beautiful valentine . . . more beautiful than any other valentine in the cellar. And it must be red, and it must be painted by my own paws." And then she shook her head sadly, and went on to say to herself, "But what am I talking about? I cannot paint. I can knit, but I cannot paint. Knit? But of course, I shall knit Longtail a beautiful red heart to wear on his grey jacket."

Jumpina was very excited and very pleased with this idea, until she realized that she had no red yarn

with which to knit the red heart.

"I must get some," she said. And she jumped from the pickle shelf on which she sat, across the room and landed on the head of the cellar steps. Cautiously she made her way through the kitchen, keeping very close to the wall, and walking very softly. She jumped from the foot of the hall stairs to the top, and then slipped quietly into Jonny's bedroom. Jonny lived in the white house, and Jonny wore red sweaters. Jumpina had seen a red sweater on Jonny many times. She flattened herself until she looked almost as thin as a paper doll, and she slipped under the clothes closet door. Even in the darkness of the closet, Jumpina, with her sharp eyes, saw a red sweater hanging neatly from a

hook. She jumped to the coat hanger, which swung a little.

"I must unravel a good fat ball of yarn from this sweater," she said. "I want my yarn valentine to be large and closely knit." She sunk her sharp teeth into the sleeve of the sweater. The thread gave way, and Jumpina began to pull and to wind. In a short time, she had a ball of red wool as large as a snowball. She knew it would roll without making a sound, and in less time than she could flick her tail, she was back on the pickle shelf and her tiny knitting needles were click-clacking with great speed.

Longtail proudly wore his yarn heart on his grey jacket on Valentine's Day. It was the talk of every mouse below stairs.

It was the talk of everyone above stairs too, but in a different way.

"Jonny," said the little boy's mother. "What on earth has happened to your red sweater? The sleeve is half gone."

"Yes, I know, Mum" said Jonny. "I don't know what could have happened to it. It was this way when I took it from the hanger today. It looks as if someone had ripped the yarn away, but no one could have done that, because my closet door was closed."

Jonny's mother shook her head. "It's very strange," she said. "It's a mystery to me."

It's not a mystery to us, is it?

Valentine Ideas

WITH paper serviettes you can make lovely lacy valentines. For the one shown in the top illustration, just fold your serviette twice. Now cut a heart-shaped opening through the first two thicknesses at the front of your valentine to make a window for your picture. Paste your picture or photo which you may wish to send to a friend, on the back of these two front sheets so that it will show through the heart window. Draw a thin red ribbon through all folds of the serviette and finish off your valentine with a well-tied bow knot.

Also cut heart shapes from paper



serviettes to make double valentines and decorate them as shown above.—A.T.

Animal Studies in Detail

Part VI of Series

by Clarence Tillenius

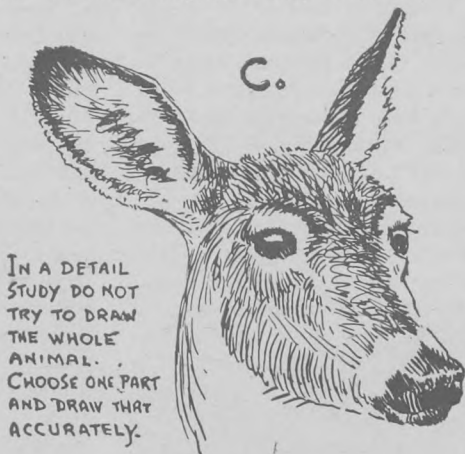
WHEN drawing animals, it sometimes happens that you may get a very good, quick outline sketch where the action and characterization is good enough that you decide to make it the basis for a picture. Let us say you have made a quick outline of a deer as in A, and wish to redraw it on a larger scale in a painting.

Right here, unless you have prepared yourself, is where you run into trouble. You will suddenly discover that in the larger drawing a great many things which were unnecessary in the small sketch, now require to be solved. The drawing and shape of the eyes, the folds of the fur, the shape of the nostrils, the outline of the ears; all these things must be drawn with accuracy if your painting is to look lifelike.

Some knowledge of anatomy is essential to the animal painter, or indeed, to any painter. Whenever you have the chance to draw an animal at rest, you should do so. Horse or cow, dog or cat, all make good models, and while they are resting or asleep is a good time to make a careful and accurate drawing of their every detail. Every part of an animal should be carefully examined and drawn both in black and white and in color. By making many, many of these detail studies as in C, D, and E, you will gradually grow familiar with the appearance of an animal in any position. Keep these studies. Later on you will find them a great help when filling in the details and correcting the drawing of the quick action sketches you make in the field.

Look at the drawing C. It is a deer's head from a three-quarter front view. Now, the ears of any animal are set on the head at opposite angles: only when the deer is looking straight at you or straight away from you will the two ears appear the same shape. Remember this while you draw: it is also true of the eyes, the nostrils, the legs, etc.

Do not neglect making these studies. They will give you the knowledge of your subject which is the foundation of good painting. Furthermore, you will find that making these drawings is intensely interesting in itself.



THE *Country* GUIDE

with which is incorporated

THE NOR'-WEST FARMER and FARM and HOME
Serving the farmers of Western Canada Since 1882

VOL. LXX WINNIPEG, FEBRUARY, 1951 No. 2

Indirect Taxes for Provinces?

Provincial government participation in the federal old age pension plan raises acutely the problem of where the provinces are to find the extra money. The answer put forward at the December dominion-provincial conference was to request an amendment to the B.N.A. Act permitting the provincial governments greater latitude in levying indirect taxes.

Theoretically, Section 92(2) of the B.N.A. Act limits the provinces to direct taxation. The judicial interpretation of a direct tax is "one that is demanded from the very person who it is intended or desired should pay it." It would be quite impossible as matters now stand for a province to collect a general sales tax, like the eight per cent sales tax the federal government collects from the manufacturer or importer, who charges it out to the consumer as part of the purchase price of the article. Provincial tax authorities have, however, shown quite a little ingenuity in devising forms of taxation which have the same effect. Five of the provinces now collect sales taxes by making retailers collect the tax from the consumer on their behalf. The retailer becomes in effect an agent of the government in collecting a tax directly from the consumer.

At the suggestion of the provinces, the federal government has circularized a draft amendment for the study of provincial governments, legalizing a turn-over tax not to exceed three per cent. This tax would be collected from retailers, but it would in reality be passed on by them to consumers as a hidden increment in retail prices. The argument advanced in favor of this tax is that it would be easier to administer and a more efficient taxing instrument than any of the alternatives suggested for raising provincial revenues. It has been estimated that at the three per cent level the ten provinces could raise jointly about \$250 million annually.

The Guide joins those who would caution parliament to go slow with this one. The arguments against the advisability of allowing the provinces to levy indirect taxes are as valid today as ever they were—as valid as when they were brilliantly expounded by Rt. Hon. Arthur Meighen in 1936 when the Senate killed a measure similar to the one now under consideration. If the need for funds requires an extension of consumption taxes there is a great deal to be said for increasing the federal sales tax to ten per cent, with proper exemptions on the necessities of life, and larger payments from the central exchequer to the provinces. The Fathers of Confederation rightly saw that indirect taxes in the hands of the separate provinces could be used by them to restrict the flow of goods from outside their own boundaries. It would be unwise in Mr. Meighen's words to put "into the hands of each province a sharp sword with which to smite every other province."

The Chinese Aggressor

The debate in the UN over the American resolution branding China as an aggressor disclosed some differences between the Americans and other non-Communist countries, but in reality they were more differences in emphasis than in reasoning. Feeling in the great republic runs high. Mass opinion cannot understand the reluctance of the other Atlantic nations to endorse the original American demand for denunciation and the immediate application of drastic sanctions. This reluctance was interpreted as a policy of appeasement, which is the certain road to defeat. Irresponsible people were saying that if the American motion failed to get overwhelming support it would sound the death knell of the UN.

There never was any dispute as to China's guilt. The British delegate, Sir Gladwyn Jebb, acknowledged it in the early stages of the debate. The British distaste for the American motion was not based on any factual doubts. Nor were the other Commonwealth nations moved by India's desire to keep Occidental nations out of Asian affairs. British diplomacy, before it committed itself to the American resolution, wished to see more clearly what lay beyond. The imposition of sanctions will make it increasingly difficult to restrict the scope of Far Eastern hostilities. The Korean war was manufactured in Moscow. It can bleed the democratic nations without costing one Russian life. If the western nations get heavily involved in it they will play into Uncle Joe's hands. Every man and every gun transported across the Pacific is that much less for the defence of western Europe, which far-sighted Americans like General Marshall have always acknowledged to be the anvil on which the destiny of modern civilization will be hammered out.

Much as the Atlantic nations admire the promptness with which the Americans filled the breach in Korea, much as they sympathize with American losses in that bitter campaign, they realize that this is a time when calm foresight, and not angry passions, must determine how far the western world can afford to press its very good case against China. It is all very well to call a spade a spade, as President Truman exhorts us to do, but we do not shout "tiger" to a specimen of that tribe running at large unless we are free to give our whole attention to the consequences. In this case we are not dealing with a spade.

There are many good Americans amongst us who are dismayed at what they regard as Canadian indifference to a common cause. There may even be some demands in the United States for disciplinary action to induce Canada to follow the American lead, as implied elsewhere in this issue by our Ottawa correspondent. Anything which tends to damage the excellent relations between our two countries must be deplored, but the fear of it must not prevent Canada from doggedly presenting the wider view to our American friends whose grievous casualties suffered in the name of the UN may take their attention off the main target.

Certainly Canada should speed up rearmament and recruitment in view of the tremendous efforts which are being made by all the other members of the Atlantic community to regain the military strength so lightly discarded five years ago. American strictures on this point are unanswerable. But the manner in which our growing strength is to be used is for Canadians to determine. This nation's foreign policy must be made at Ottawa not Washington, nor as the Russians would say, on Wall St.

Dump Duty on Cars

Eighteen months ago Canadian trade experts, from the finance minister down, were freely advising British exporters what they had to do to get their goods into the hands of Canadian consumers so that they could earn the dollars necessary to continue the purchase of Canadian products. Some of the British exporters took the advice to heart, notably manufacturers of automobiles. By changes in design to fit their cars to Canadian conditions, by aggressive sales measures, and by the development of a wide servicing network, they built for themselves a market which grew rapidly to the order of about 60,000 cars a year. Having achieved this remarkable feat they now find themselves faced with a hostile move. They are now warned that after May 31 their product will be subject to a dumping duty.

It should be explained that while American cars pay a 17½ per cent customs duty British cars are admitted duty free. Cars from every source, however, pay a sales tax of eight per cent and an excise tax of 15 per cent. Prior to August 9, 1948, all imported cars were subject to dump duty. On that day they were exempted. Up to that time there was some reluctance on the part of British car manufacturers to undertake the heavy expense of seriously breaking into this highly competitive market. Their leaders are on record as having said "Why should we? As soon as we are successful in the Canadian market, tariff and other hindrances will

be put in our way." They preferred to confine their expansion in the less exacting but less capricious, sterling area car market. The withdrawal of the dump duty in 1948, however, gave them the necessary assurance that artificial obstacles would not be put in their way, and from that time on they made rapid strides to the resounding mutual benefit of both countries.

The purpose of a dump duty is to prevent flooding of a protected market by goods sold at less than the home price. Living in the shadow of the American industrial giant, it is probably true that Canada cannot entirely dispense with the principle. Since the days of the Bennett regime, however, when customs practices and regulations were contorted to produce startling results, Canadian consumers are leery of them. They are on the defensive as soon as new ones are promulgated.

When the reimposition of dump duties on cars was first announced, it was widely assumed that British cars were probably all selling for less in Canada than in their homeland, and that the effect of the order would be a general price increase to escape the penalty. Further examination discloses that none of the popular makes are being dumped. It may be that some of the higher priced models are shading their prices slightly in order to gain a toe hold in this market, as some of the low priced lines did when the expansion into this market first began.

While the effect of the order will not be as serious as first imagined, it has produced a bad reaction among British exporters of all commodities. They must conclude that the government at Ottawa has not been able to withstand the pressure from those seeking further restrictions on foreign importations. Their natural impulse will be to say "We told you so. What other measures are you planning to limit our expansion?"

It will be a bad day for Canadian farmers depending on overseas markets if attempts to build up dollar earning exports to Canada are to be discouraged. The least that can be done now is to have a reaffirmation by high authority of Canada's desire for a further increase in the importation of British cars and other goods, coupled with a solemn engagement not to make any upward change in our tariff structure, nor to raise any other irritating artificial barriers.

"Constant" Dollars

Whatever farm listeners may conclude from the debate at Calgary between Prof. J. L. McDougall and G. W. Robertson of the Saskatchewan Pool on grain marketing, subsequently broadcast on Farm Radio Forum January 29, they must have been impressed by the usefulness of the constant dollar as a measure of economic values. Based on the purchasing power of a bushel of wheat during the period 1935-39, Prof. McDougall asserted that in the decade 1904-14 a bushel of wheat was worth an average of \$1.29 in constant dollars; in 1947-48, 97 cents; in 1949-50, 80 cents; and for the present crop year, 71 cents!

This piece of evidence may convince non-farm people that wheat is one of the cheapest necessities of life today, and may set them wondering how long that may last. This reduction in the purchasing power of wheat would have worked great hardship among those who produce it but for changes which have taken place concurrently in wheat production. Within our own time prairie acres have witnessed a mechanizing process no less remarkable than that which has overtaken industry. Wheat is being produced more cheaply per acre than ever before, and if the bounty of Providence continues to fructify the labors of man in the way it has during the past decade, some revision in the old price in constant dollars would be tolerable, although that is not to say that the present price expressed in that nomenclature is justifiable.

Let us not be fooled in one respect, however. The mechanization process has just about run its course. There is not much more that the mechanical wizards can devise to lessen the labor required to produce a crop of wheat. Any further reduction in the price of wheat in constant dollars will make itself felt in the farm standard of living, whether that reduction is effected by a lower market price for wheat or a higher price for other commodities.

* Carry on in '51 with UNITED GRAIN GROWERS LIMITED

** The slogan of the 42,000 Farmer Members of
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Spread across the three Prairie Provinces and overlapping onto the waterfronts of Ontario and British Columbia, the (617) country elevators and grain terminals of United Grain Growers Limited furnish tangible evidence of the growth and progress of Canada's pioneer farmers' company.

Who could have predicted, 45 years ago, that this nation's first farmer-owned co-operative, starting its business in a 10-foot tent, would one day spread across a vast agricultural hinterland thousands of miles in area!

Who could have foretold that the advantages and financial benefits accruing to farmer members---now over 42,000 in number---would establish a record beyond compare in the history of Canadian farmer-owned co-operatives: Democratic control---based upon the tried and proven principles of the Rochdale Pioneers,



founding fathers of co-operation; one-man-one-vote, with farmer-shareholder-delegates elected from 300 locals to Annual Meet-



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Such is the story of 45 years---a story of faith and courage, backed by determination and loyalty---resulting in an achievement in progress and stability so outstanding as to make present-day farmer-membership in U.G.G. the proud heritage of a triumphant past and the challenge to a future of still greater benefit to farmers.

Small wonder that the co-operative slogan of over 42,000 farmers is:

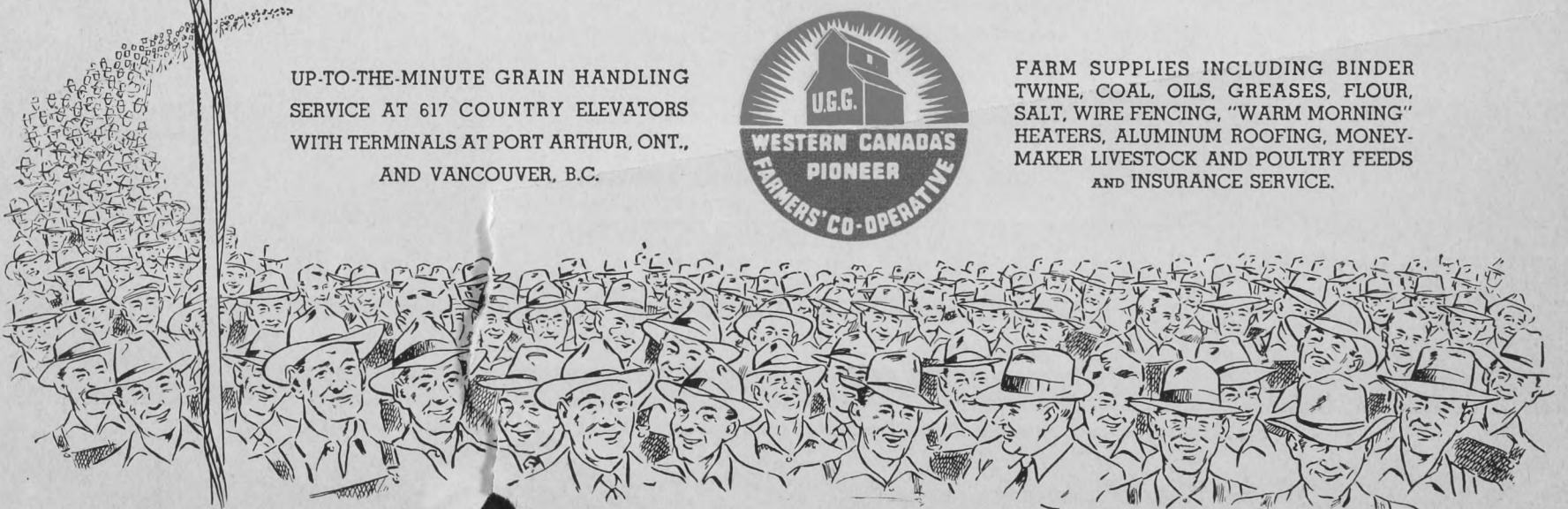


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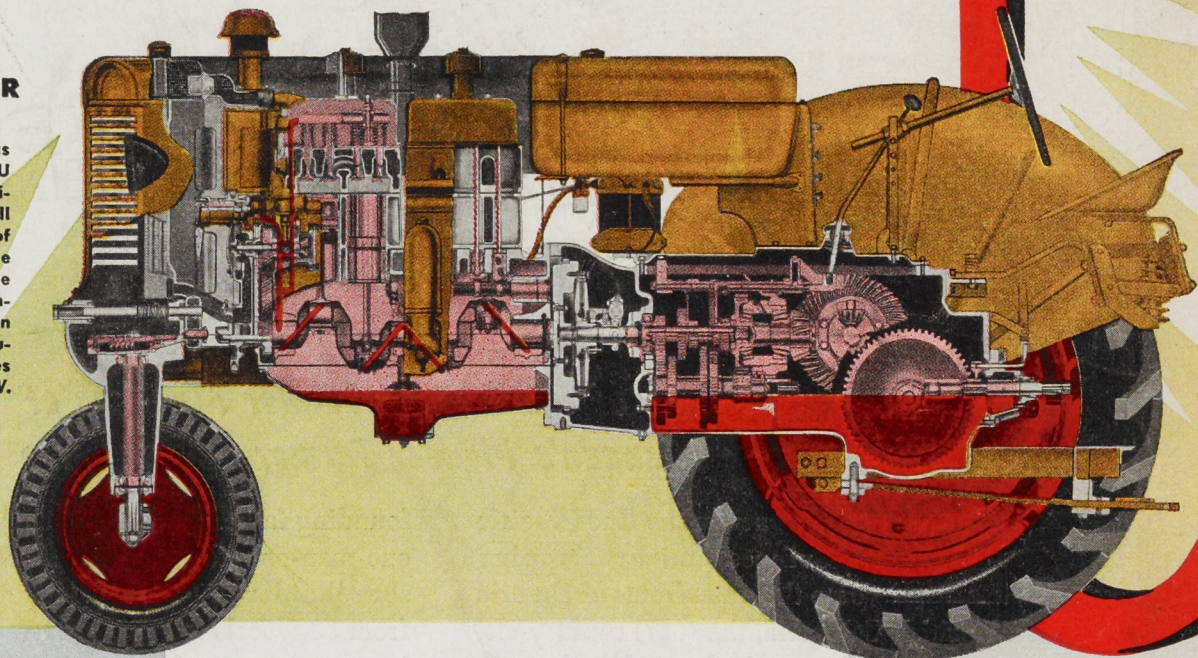
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THE MODEL

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FIRST factory-equipped LP gas tractor (1941), the Visionlined U is available with factory-engineered equipment that meets all safety regulations for the use of this lower-cost, higher-octane fuel. More power, longer engine life, still greater operating economy, and maintenance costs even lower than MM's enviable reputation... these are "plus" values you'll want to investigate, NOW.



PREFERRED for PERFORMANCE • DEMANDED for DEPENDABILITY

There is balanced weight and power in this 3-4 plow *quality* engineered tractor. High turbulence combustion, controlled cooling, and full pressure lubrication to all moving parts give the model U performance that is preferred... and profitable for all your farm tasks!

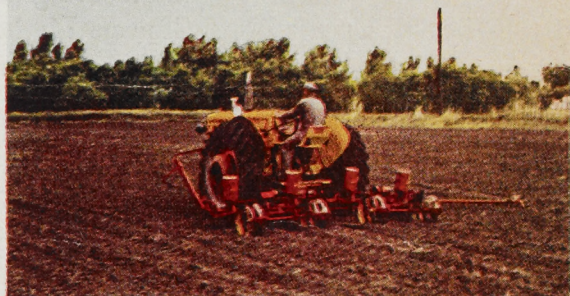
The powerful U tractor gets more work done every hour with greater economy of fuel and labor costs per acre. The five forward speeds of the heavy-duty transmission permit operator to match *economical* power to the task at hand. Precision cut transmission gears have large tooth surfaces, are heat treated and run in a bath of oil for quiet running and long life. It is Visionlined for easier operation, greater safety, extra comfort, trim appearance, and better visibility with the famous MM Quick-On—Quick-Off tractor-mounted cultivators, drill, lister and checkrow planters, listing plows and middlebreakers or pull-behind implements. Uni-Matic Power, available as extra equipment, affords smooth, accurate control for hydraulically raising, lowering, and adjusting the height or depth of implements *while on the move!* Four kinds of power are available: drawbar, Uni-Matic Power, power take-off, and belt.

ECONOMICAL, LONG-LIFE ENGINE—The heavy-duty, 4-cylinder engine of the U features: quality construction... high turbulence combustion chambers... cylinders cast in pairs and anchored to crankcase by sturdy studs to keep cylinder and crankcase aligned... equipment for burning gasoline, distillate, or liquefied petroleum gas... dynamically balanced crankshaft with 3 precision-type main bearings... cast proferall metal camshaft... controlled cooling... scientific system of fuel, oil, and air filters... easy servicing and inspection and force-feed filtered lubrication to connecting rods, main bearings, valve mechanism, camshaft, accessory shaft, timing gears, and governor.

GREATER COMFORT... GREATER SAFETY—The balanced weight and Visionlined design of the U gives you ease of operation with greater safety at all times.

Investigate carefully and you, too, will agree that the MM Visionlined U, with hand operated clutch and many other exclusive features, is the tractor for you!

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